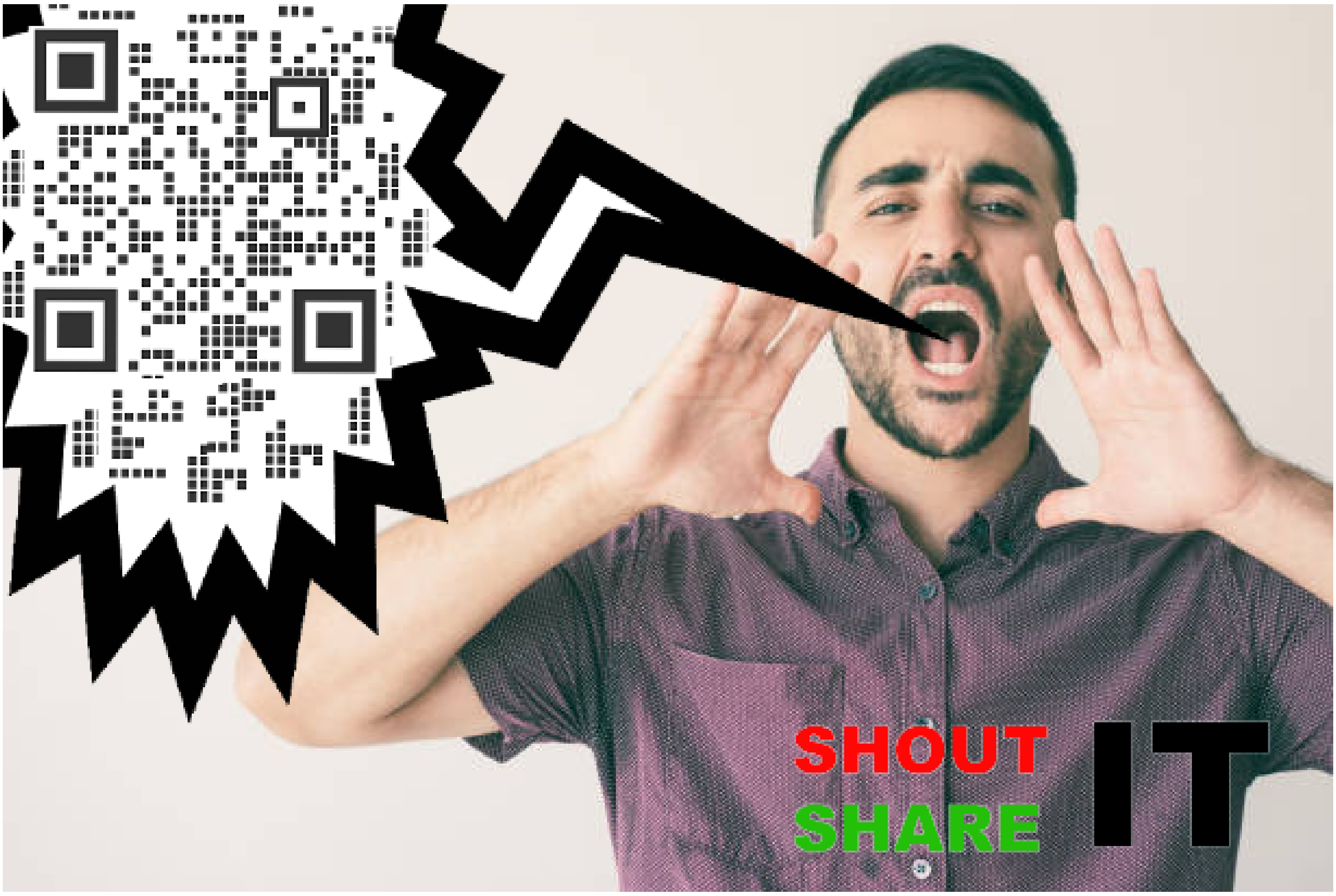
THROUGH ANGOLA
A COMING COLONY

Colonel J.C.B. Statham



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THROUGH ANGOLA

THE GIANT SABLE AT HOME—HUGE BEASTS WITH WONDROUS HORNS

Frontispiece]

THROUGH ANGOLA

A COMING COLONY

BY

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WITH 138 ILLUSTRATIONS
2 MAPS AND 4 CHARTS

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PREFACE

WHEN still a child, forty years ago, I was taught to hold a gun and try not to be afraid when the bigger folk with me were hunting bear and tiger in India. During the last twenty years a notebook and camera have gone with the guns, but so far none of the diaries of these fifteen hunting trips have been published. This book, taken largely from the last diary, was written in Dublin, simply to wile away the long curfew hours of waiting and suspense of an officer's life in Ireland. What to me was a curfew task may be of value as the first work published in English for fifty years on Angola, a wonderful African colony, with vast bracing uplands and wealth in its many resources, a fauna of rare animals, a flora of many beautiful plants, and great promise of future colonization and commerce.

It was at an Angolan port that Livingstone, my boyhood's hero, and the bravest yet gentlest of all explorers, ended his first great African journey in 1853, and as my first African journey, made many years ago, had been a pilgrimage to where his heart lies buried at Lake Banguelo, both sentiment and interest urged me to Angola to see a country which he had crossed.

The two chapters on the voyage to Angola, by way of the islands of the Desertas, with their wild goats; of Cape Verde, and their barren grandeur; San Thomé and Principe, with their tropical beauty, may interest those who sail by them or care to know their story. That on the history of the colony goes back 350 years, and is full of curious incident and quaint custom taken from original works of earlier centuries in Portuguese, Italian, Dutch, and French.

Three chapters deal with the railways of the colony. The story of the Benguella-Katanga line and how a Briton fought single-handed to prevent German control of this valuable commercial and strategical route, is a small tribute to one of that famous band of men of whom Rhodes was the chief.

The chapter on the highlands of Angola, land, soil, stock produce, and 400 species of its plant life may benefit the settler, as that on the economic future may interest the investor.

The description of 350 animals, and the quest and hunting of the giant sable will give an idea of Angola's fauna and that splendid newly-found antelope, of its habits and the country it lives in, and induce others to seek it with mercy and protect its future.

The pages devoted to insects and the diseases they carry are written from many years of scientific observation of African insect life and tropical maladies; while those on physiography and climate may help the traveller in Angola to avoid its unhealthy regions and seasons.

The description of native customs and religion were written from notes made on this journey, and from older historians like Cavazzi, Carli, Dapper, and Douville, who described these customs before they were affected by Western civilization.

To keep the large map up to date, projected as well as actual roads and posts are shown, and constantly changing villages omitted. Names are spelt as in Portuguese maps. For their pronunciation, *C* has a *K* sound; *Ch* and *X* that of *Sh*; and vowels are pronounced continentally.

I am indebted to Mr. W. Smith, M.A., of Edinburgh, and Mr. Studt for revising the botany and geology chapters; to Lieut.-Col. Tate and Majors Hayes, Kelly, and Finlayson for help in other directions; to Mr. Leo Weinthal of the *African World*; to Mr. Whitside of Bedfont, Mr. W. Scott of Glasgow, Captain Cossart and Mr. Perestrello of Madeira, and Messrs. Grenfell and Hart of Mossamedes for the loan of twelve photographs; and to Colonel Roma Machado for sending me books and maps.

J. C. B. STATHAM.

EDINBURGH, *February* 1922.

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PART I

THE JOURNEY

BY THE DESERTED ISLANDS TO ANGOLA, AND THROUGH IT IN QUEST OF THE GIANT SABLE

CHAPTER I

THE QUEST OF THE GIANT SABLE—ENGLAND TO MADEIRA—THE WILD GOATS OF THE DESERTAS

ON the voyage to Angola, in April 1920, a Portuguese judge gravely told me that no countryman of his would be considered sane if, after five years of the hazards and discomforts of war, he set out at once for a year of life in the African wilds. He added equally gravely that of course Englishmen could not be judged by any ordinary standard. And yet there was great happiness for me in going back to so-called savage Africa, from which, as the ancients said, came ever something new; where, unknown to modern history, was once an ancient civilization, recorded to-day in legends of long-gone empires, and the relics of a culture coeval with the more ancient States of Europe and Asia.

I was happy to go back to a land where any day of march or search might bring some such record of these far yesterdays of the human African story, as it could bring something new of its wonderful animal life; looked forward to those evenings by the camp fire where the old men spoke of legend, and the young men of animal lore. There was happiness in going back to watch by wood and stream the life of bird and beast, back to bush life with all its charms, and to the great peace and silence of the jungle.

In the weary war years, one had dreamed many hunting dreams. I was again in the lands of the dwarf elephant and the pygmy hippo, or hunting the gorilla in the Cameroons, and the elephant in the Congo. Then would come that longing to go back to the Barue and make sure if the rumour of its white rhino was true, or to know if that record giant eland, met years ago, still roamed near the Bakoy River in Senegambia. Though the foolish stories of the Brontosaurus of Banguelo could never tempt one back to these swamps, yet I did wonder whether a friend's story of a new animal, half-hog, half-deer, possibly an African babaroussa, was worth following to the wilds of West and Central Africa. But all these old haunts were too unhealthy for a war-worn man; to return to Canada or Sardinia was not to escape civilization, and all hope of an expedition planned to Siberia and the Kadiac Islands was abandoned through transport and other difficulties. Then I remembered what Captain Varian had told me in France in 1917 of a little-known country called Angola, which I remembered only as the land of Livingstone's first great African journey, and of a new antelope, the giant sable, which lived in healthy highlands, and it was to follow again my hero's footsteps, and for photographs and specimens of this rare animal, that I went to Angola.

The common sable (*Hippotragus niger*) has a shoulder height of 13 hands in the bull, and somewhat less in the cow. The colour, except for the white of the belly and inner surfaces of the limbs, is black in the adult bull, and varies from brown in the young male to a dark fawn in the female. On the face are two white patches, one on the jaw, the other a stripe running from eye to muzzle. Both sexes carry a mane and curved, ringed horns, 3 to 4 feet long in the bull, but much shorter in the cow.

The giant sable of Angola differs from the common sable in its larger body, brighter chestnut coat of the cow, and the shorter face-stripe[1] of the bull. The most striking difference, however, lies in the wondrous massive horns, which in the bull sweep from head to flank in a glorious curve, 5 feet in length. From European and native reports, and the result of a trip in 1913, Varian described the giant sable as inhabiting the watershed between the Loando and Coanza Rivers; while in 1919 he had shot them near the Loando. Major Odlum told me, some years ago, that he had seen sable antelope with enormous horns near the Etosha Pan in South-West Africa, just south of Angola, while Selous found exceptionally long-horned sable on the Chobe River, near the south-east corner of Angola.

My trip to Angola has determined the northern distribution of this splendid antelope, but it has not solved the problem of how and from where the sable arrived in their present location between the Coanza and Loando Rivers. Are the big-horned sable seen by Selous to the south-east of

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[1] This is not characteristic, as I have occasionally seen common sable with short face-stripe.

Angola, and similar animals seen by Odlum below the southern boundary of Angola, giant or common sable? If they are giant sable, perhaps portions of these southern herds have trekked northwards till their march was stopped by the unfordable nature of such large rivers as the Coanza and Loando, in which watershed this group of sable now remains, separated from their kin hundreds of miles to the south and south-east. On the other hand, we may have in this watershed a small family of sable antelope which, through a long residence in special conditions, have altered to a small extent in their skin markings, and developed through special food material the magnificent horns which distinguish them.

My war leave was to start in April 1920, a very suitable date for the trip.

Angola, being situated south of the Equator, has reversed climatic conditions to those obtaining in Europe or Northern Africa. The hot season and the rainfall occur between October and April, the cold or dry season from May to September, and it was during this part of the year that I hoped to do most of my hunting in Angola. During the rainy season the coarse grass grows here, as elsewhere in Africa, to a height of many feet, and with the thick foliage which the rains have brought to all plant life, it is difficult to see or track game animals. After March and April, when the rains south of the Equator have ceased, and the dry season has commenced, the natives burn the drying grass to make hunting easier, by destroying the cover which hides the game, and to clear new fields for cultivation. The dry season is not only the cold, but also the healthy season in Africa, for the absence of water in small streams and pools means the absence of malarial mosquitoes which breed in them.

Both the Portuguese Steamship Lines sailing to Angola start from Lisbon, and after calling at Madeira, San Vincent, and occasionally the more southern Portuguese islands of San Thomé and Principe, visit the Angolan ports of Cabinda, Loanda, Lobito Bay, and Mossamedes. Owing to the rush of Portuguese passengers to Angola, it had been impossible to secure a passage from Lisbon to that colony, so I sailed for Madeira in the *Edinburgh Castle* on 1st May, there to await the Portuguese ships, and hope for a vacant berth.

On the voyage I met Yule, who in 1907, at Broken Hill, had one day lifted me from the hammock which had carried me, often delirious, through hundreds of miles of bush from Lake Banguelo in Central Africa. This terrible journey happily ended in the kindly hands of Yule and his friends, the first white men seen for many weeks. Yule, who was now working at Elizabethville in the Congo, was returning there from short leave in England, to hard Mother Africa, who, though she often punishes her children, can always call them back to her again.

On my arrival at Funchal, Madeira, all my guns and stores for Angola were placed in bond in the Custom-House—a convenient and economical arrangement, effected rapidly by the Customs officials of the port.

So far everything had gone well, but my misfortunes began when I went to one of the best-known English shipping companies, which apparently was content to advertise the arrival of ships without taking the trouble to verify their sailings. A ship advertised to arrive on 25th May, passed the island without calling; others advertised to arrive in June came in July, and it was only with the help of a friend, Mr. Hinton of Madeira, that I managed to get away from the island.

To those intending to visit Angola, I would say avoid Madeira and its shipping agencies. If travelling by a Portuguese ship from Lisbon, book your passage several weeks in advance. The best course is to sail from Rotterdam, or by English ships that are beginning to sail again, generally from Liverpool, to Angola. Come back if you can in the same way, for this will save you the perfectly infernal Customs worries at Lisbon.

I will not describe modern Madeira, further than to say that it is a beautiful island mountain, rising to 6000 feet above the sea, that its climate is like that of the south of France, and its "Quintas," or country houses, are as beautiful as Funchal itself is ugly and dirty.

Two and a half months of my precious leave, and the best of the hunting season, had been lost, but not entirely wasted, as by hard study I learned Portuguese, a language which helped me on my trip through Angola, and to read old histories of this part of Africa.

It is a curious fact that our friends the Portuguese, who allege that Livingstone, Bruce, Speke,

THE DESERTED ISLANDS, WHERE I HUNTED WILD GOATS

DESERTED ISLANDS—SHEER DOWN, 800 FEET BELOW, WAS THE SURGING SEA

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DESERTED ISLANDS—CARRYING THE GOAT HOME

PAREISHA AND TWO OF THE LUGGER'S CREW

GOAT HEADS BY THE ENTRANCE OF OUR CAVE

Grant, and other British explorers of the nineteenth century did but follow in the footsteps of earlier Portuguese travellers and discover the already known, have forgotten that it was an Englishman, and not, as they claim, a Portuguese, who discovered Madeira. According to the Portuguese it was Jean Gonsalvez and Tristan Vacz who, in 1420 A.D., discovered Madeira, and Vaez and João Zareo who found Port Santo in 1428. They omit to record that one of their own historians, Antonio Galvano, gives the credit of the discovery to the English sailor Macham as early as 1344 A.D. In *Hakluyt's Voyages* is the following translation of Macham's discovery :

"The voyage of Macham, an English Man, wherein he first of any man discovered the Iland of Madera, recorded verbatim in the Portugall history written by Antonio Galvano.

"In the year 1344, King Peter the fourth of that name reigning in Aragon, the Chronicles of his age write that about this time the Iland of Madera, standing in 32 degrees, was discovered by an English Man, which was named Macham, who sailing out of England into Spaine, with a woman that he stole, arrived by tempest in that Iland and did cast anker in that haven or bay, which now is called Machico after the name of Macham. And because his lover was seasicke, he went on land with some of his company, and the shippe with a good winde made saile away, and the woman died for thought. Macham, which loved her dearly, built a chapell or hermitage, to bury her in, calling it by the name of Jesus, and caused his name and hers to be written or graven upon the stone of her tombe, and the occasion of their arrivall there. And afterwards he ordeined a boat made of one tree (for there be trees of a great compasse about) and went to sea in it, with those men that he had, and were left behinde with him, and came upon the coast of Afrike, without saile or oare. And the Moores which saw it tooke it to be a marvellous thing, and presented him unto the king of that countrey for a woonder, and that king also sent him and his companions for a miracle unto the king of Castile."

When first discovered, the Madeira Islands were covered with dense forests, and a fire set alight at Madeira is said to have lasted for seven years.

In my equipment was a "Reflex" quarter-plate camera, built years ago to my design, for use with telephotograph lenses, which for the moment were a 25-inch Grandac and a 13-inch Telecentric. Both to test the camera and for the excellent sport they afforded, I obtained permission from Mr. Hinton and Captain Cossart to hunt wild goats in the Desertas, islands near Madeira, of which they are the thirteenth owners or lords.

The first lord of the Desertas was Zarco, who discovered them in 1428, and his family held these islands in fief to the Portuguese Crown for nearly five hundred years. They then passed to a Madeira family, and finally were purchased by Hinton's and Cossart's fathers, some forty years ago, for the sport they afforded and any revenue which the gathering of Orchilla moss (a once famous dye product) might yield.

These islands were first occupied in the fifteenth century, and used mainly for pastoral purposes, as is shown by this extract from *Hakluyt's Voyages*, as quoted from the letters of Thomas Nicols, an Englishman, in 1526 :

> " On the East side of the Ile of Madera sixe leagues distant standeth another litle Iland called the Desert, which produceth onely Orchell, and nourisheth a great number of Goates, for the provision of the maine Iland."

A great cloud-burst destroyed the few farms and the old Chapel of Deserta Grande over a century ago, and drove away the inhabitants with their flocks and herds. Ever since then the islands have been left to wild goat and sea-gull, which haunt crag and crest of their wall-like cliffs, and to the seals, which live deep down in caves where the sea breaks over a rocky shore.

There are three islands in the Desertas, and while all are precipitous, they differ much in size. The most easterly, Chãou, about half a mile long, is flat topped, and some 300 feet high. Deserta Grande, the central island, nearly 12 miles long, rises to a height of 1500 feet in the centre, sloping to 600 or 700 feet at either end, by an open valley westwards, and a sharp saddleback to the east. Bugio, the eastern island, though called Monkey's Back, resembles a crocodile's more closely. It is some 7 miles long, and rises in a line of sheer cliffs from the sea.

On Bugio there are big black goats with horns up to 2 feet in length. Those of Deserta Grande are smaller, both in head and body, and mostly brownish in colour. There were once wild sheep on the island, but the last of them was shot nearly fifty years ago.

Chãon, the smallest island, has no goats, but only Belgian hares. There are a few wild cats as well, the progeny of ships' cats, stranded from a wreck.

The goats of the Desertas are usually hunted by drives, and the beaters come from a village called Canico, in Madeira. They are splendid climbers, who have learned their work while hunting for puffins and Orchilla weed on the cliffs. When I sailed one day early in June from Madeira for the Desertas, three of these mountaineers were to have accompanied me; but it was a "Festa" day, and any one who knows Madeira knows that no true Madeira man will work on a "Festa" day, so it happened that two of the three hunters were not ready, and the lugger sailed with only one guide beside the crew. This guide was Zabrugar, otherwise called Pareisha, the veteran of the Desertas, seventy years old, but hardy, and with the foot of a goat.

After a rough crossing in a heavy sea, the lugger anchored in the lee of Chãon Island, and Pareisha and I were landed by boat, through the surf, on a rocky cove called Castaneira. The boat's crew went off to rejoin the lugger, promising to return next day if the sea allowed it; and old Pareisha and I picked our way over the rocks with our food and blankets, the rifle and camera, to sleep in a cave under the cliffs.

The next day the boat failed to come, and we had to climb a cleft in the cliffs and carry our kit as best we could. Cossart had told me at Madeira that Pareisha was the best climber of all the mountaineers of Canico, and I could well believe this, for the old man climbed with the big camera and haversack better than I did with rifle alone.

The cliff path was so steep that I had to use both hands and feet in the climb. When we at last stood on the crest of the eastern cliff of the island, we could see below us the flat-topped island of Chãon rising like a table from the sea, while 20 miles farther eastward was Madeira. Sheer down, hundreds of feet below us, was the cove from where we had climbed, with the ever-restless sea. To the west lay an open valley, sloping upwards for several miles to a hill in the centre of the island, and in the foreground of the valley was a herd of wild goats with one big ram.

We had been late in starting and the scenery would stay but the goats would not, so down I went, toe and elbow, to the old game, the best game in the world, the matching of a hunter's craft against the wiliest of all animals, the wild goat in his mountains. But alas! I had reckoned without Pareisha, who liked climbing and would beat for goats, but who did not think it meet for the King of the Canico Highlanders to crawl on his belly like any snake in the grass. Thus it was that, after creeping along painfully for some distance on the stony ground, I found old Pareisha walking upright, yards behind me. Owing to his stubbornness I lost my first chance, as the goats saw Pareisha and ran, giving me a difficult shot at a hundred yards at the ram, which appeared at the time to have been missed, though actually mortally wounded and found dead soon after.

A mile or so up the valley, searching continually for goats, we came to a rough stone wall and a broken well; farther on, a ruined house and the remains of a chapel—all that was left of three hundred years of human occupation. Man was driven from the island by the fierce wind and rain a hundred years ago; then the wild sheep disappeared (even a pair of moufflon from Sardinia placed on the island have never been seen since); the last of the pine woods is nearly gone, the dying trees throwing out innumerable cones in a pathetic and desperate endeavour to reproduce their kind.

The goat alone is left, as hardy as a life amidst little grazing and less water can make him; wary and ever more watchful as the years go by, but happy possibly in the freedom of the wilds.

After continual searching we saw and then stalked on the northern cliff of the island a small herd, of which the big goat was mortally wounded and found refuge in a precipice, from which it seemed impossible to retrieve him; but old Pareisha went down the cliff without a word, and a couple of hours after brought up the goat. I watched part of his climb, and the ground he traversed was so steep as to have been very difficult for a young mountaineer to have crossed, unburdened; for an old man of seventy to have done so, with a goat on his back, was a marvel. I would never have asked Pareisha to go down the cliff, and would have stopped him had I known his intention, but from what one saw of him later in the day it was easy to realize that the old man was as sure-footed on these rocky precipices as the goats he hunted. The dead goat was about 30 inches high at the shoulder, and of a brown colour, with dark forequarters and beard, a black saddle, and a dark line running down the back. The horns, 13 inches long, had the spiral twist of the domestic and not the wild goat.

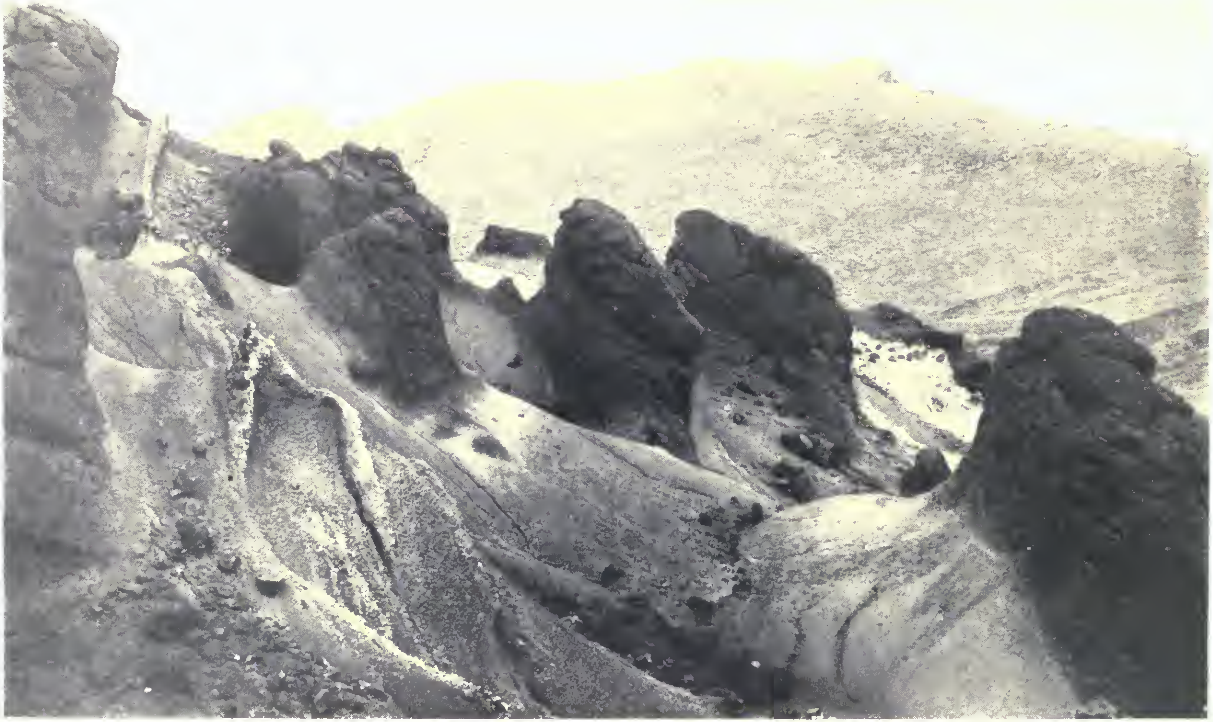
I had no wish to go on killing, the least part of hunting, now that the specimen I wanted was lying there; but the Lords of the Desertas had asked me to kill off some of the older rams in the interests of breeding, so I resolved that the hunting of each of them should be worthy of the wonderful barren mountain in the sea. While Pareisha watched for goats, I fear my eyes saw only the blue sea and breaking white foam on the shore, and purpling heather on the hill, where sunshine and shadows were chasing each other as the fierce wind swept the clouds across the sun.

Curiously enough, however, it was I who saw the old goat, just a glint of horn behind the rock where he was lying. A delightfully difficult stalk brought me within a hundred yards before the goat saw me, jumped and ran, but fell to the shot. A much bigger male now showed himself—a cripple—one leg was stiff and his pace slow. He was spared, perhaps less for his sake than that of the harem, which surrounded him so affectionately to hustle him away. It was growing dark, the sun had set in a glory of reds and yellows, turning to purple and grey, so we started to scramble down the steep cliff to our cave by the sea.

About fifty or sixty goats had been seen during the day, and the great majority had been of the same brown colour as the two shot. Some, however, were of a lighter tint, but still carried the dark saddle marking and back stripe of the brown goat. The does were generally brown, though one or two were almost black in colour. The kids were usually light fawn, a few were grey.

There is some evidence of protective coloration and reversion to the wild type in the markings and colour of the goat of the Desertas, which continues to approximate more closely to that of the rocks among which he lives; the black-and-white animals are being eliminated, possibly through their conspicuousness; and the rock-coloured goat is now the dominant type. Unable to sleep for thirst (our remaining water supply had become tainted), I lay awake listening to the cry of hundreds of gulls and puffins, indignant perhaps at an intrusion into their lonely island home.

We managed next day to attract the attention of the lugger's crew, who brought us fresh water, and carried our blankets and food up the cliffs to the valley, while we hunted the higher ground which lies above it; first stalking a herd which contained no good head and was left in peace, and then a big goat in what I called the "goblin country," a land of deep gullies and weird columns of red sand, mixed with round volcanic stones.



THE "GOBLIN COUNTRY"

These columns were of all sizes and shapes, cut out from the soil by the storms of many years.

In this goblin country, the old goat lay behind a rock well guarded by three nannies. The stalk was successful, and I felt so sure of the animal that, instead of waiting for him to get up, I fired when he was lying down, and the bullet went over his back. In a flash, the old goat, who knew what a bullet meant, was round a corner, and when next seen was running down the cliff 300 yards away. I would far rather have photographed goats than shot them, but the terrific wind, drifting mists, and rain rendered this impossible. Though we worked hard all day, we never saw another good head, and went back to our blankets, under a wall of the ruined house, to sleep as best we could, in a gale that was driving the rain through our clothes to our very bones.

The next day, after losing one good head through a shifting wind which spoilt a good stalk, I managed to bag another, of 14 inches; but bitterly regretted that my camera had been left behind, for the sun came out as we approached the herd, and gave me the chance of a good photograph. After this I always carried the camera, and had one wonderful chance, when a goat came grazing to within 30 yards of where we were having lunch behind a rock. The movement I made to get the camera betrayed me, and the goat bolted.

That night I left the Desertas, and left them with deep regret, but our food and water supply were exhausted, and the men of the lugger were clamouring to get back to Madeira.

CHAPTER II

MADEIRA TO ANGOLA BY THE WEST AFRICAN ISLANDS

ON 4th July, the first Angola-bound ship entered Funchal harbour, and through my friend Hinton's influence my passage was secured. That night, as Madeira faded into the shadows, I felt that at last the weary weeks of waiting were over, and new lands and a happier life lay ahead.

The *Mossamedes*, which now sailed under the green-and-red flag of Portugal, had been once the P. & O. liner *Sumatra*, an old friend, met years ago, bound for Indian seas. Far-away days those—of youngsters eagerly looking forward to life in India: of youth and hope and comradeship, which time and war have sadly changed.

But now we sailed, a very different company. There were Portuguese officials, both military and civil, merchants, planters, and agents, bound not only for Angola, but for one or other of the West African islands as well. A large number of the Portuguese were mulattoes, and some of those who had no negro blood were very dark, probably through an old-time Moorish ancestry. There seemed to be no colour line and class distinctions as we know them—black, brown, and white, or white, brown, and black: the order of social precedence could be either way; while Portuguese officers had black wives, and white women dark husbands. Even to one who had travelled in foreign colonies, the extent of this intermingling was remarkable, and even more astonishing was the presence on board of illegitimate children returning from Portugal where they had been educated with their father's relatives. This absence of a colour bar and the free mating of the Portuguese with coloured women may lose him respect among natives, but, it is only fair to say, seems to gain him a certain measure of their affection.

There were a dozen Americans aboard going to Angola to work in the great mineral concessions which America had obtained in Angola. The men were mostly young and energetic, very like young Englishmen, and as keen to see the new country and know the woods and wilds as one's own countrymen would have been.

The meals on Portuguese ships are tea and biscuits in the early morning, lunch at eleven, tea at four, dinner at seven, supper at nine. The wines were excellent and the food was good, if one could avoid the bachalau, a kind of mature cod-fish, served as a stew with potatoes and rice, a dish from which I would always slip away to the deck and fresh air. One might get to like bachalau in a breezy dining-room or on solid earth, as one gets to like strong cheese, but I retire before this very dead fish in a stuffy saloon at sea.

Four days after leaving Madeira we steamed in between two barren islands, rising high from the sea, San Antonio and San Vincent.

We had passed the fabled Sargasso Sea of the ancients, where such masses of seaweed were said to grow that ships were held fast until freed by a favouring wind. It was here that Sataspes is supposed to have been held fast and forced to return to Egypt, from where he had started to sail round Africa. Sataspes had been condemned to crucifixion by Xerxes for the rape of the daughter of Zopyrus, but his mother, the sister of Darius, interceded with Xerxes, and the sentence was changed to the African journey. Sataspes, after passing out of the Mediterranean and when near the Fortunate Islands, is supposed to have met the seaweed of Sargasso, but, yearning for the flesh-pots of Egypt, had sailed back there with this story.

The wind was blowing half a gale as we steamed into San Vincent harbour, a somewhat open roadstead, depending on the mountain heights of the two neighbouring islands for its shelter. In the middle of the harbour is a small island and lighthouse. Even here the seas were breaking in spray 100 feet up its steep rocks. At San Vincent were lying a dozen ships of all nations, and four ships, too, that will never sail the seas again; for they are the wrecks of vessels torpedoed in the Great War. San Vincent has become one of the world's main coaling and cable stations, for it lies on the great sea-way to South America. We were in quarantine for a supposed case of small-pox, and could not land to escape the coal dust, which we suffered for two days, so slow were the methods of coaling by barges, and so great the press of ships to be coaled, for the ships' flags of nine nations were flying in the bay.

The great barren hills of San Vincent remind one much of Aden. Rising abruptly from the sea were great hills with rocky crag and sandy valley, with never a patch of green, and in the foreground an ugly, shadeless town. Here, unlike the stillness of Aden, were the endless rush of wind and the roar of the sea.

The Islands of Cape Verde were discovered by Luis de Cadamosto and a Genoese gentleman in the service of Portugal in 1446, whose adventures are to be found in *Ramusio's Voyages* of the sixteenth century. The first island these sea captains saw they called Boa Vista, to show their happiness, and from this island, which was uninhabited, and where the doves were so tame that the sailors killed them with their hands, they saw two other islands near them, and others farther away to the north and west. After leaving Boa Vista, they sailed south to an island they called San Thiago, as this was the saint day on which it was sighted. At San Thiago they found a river with fresh water and numbers of great turtles, which they declared were very good to eat.

I am afraid the turtles had all been eaten before the *Mossamedes* steamed into the harbour of San Thiago and anchored off Praya, which is the Government centre of the whole group of the Cape Verde Islands and the seat of the bishop and cathedral church. Thiago is very much prettier than San Vincent; trees and grass are to be found in the valleys of the island, which does not rise into the barren rocky mountains and ravines that are so mournful a feature in San Vincent.

We reached Principe Island on 15th July, a week after leaving San Thiago. If San Vincent is the Aden of West Africa, Principe and San Thomé might compare with Ceylon. I had never seen anything quite like Principe before. Fernando Po and Teneriffe have far higher mountain peaks, and the wealth of verdure at the former island is much like what one finds at Principe, but Principe looks as if it had been blown up from the sea, or had blown itself up after rising from it. It is a tumbling mass of bleak jagged peaks and pinnacles and sheer seaward cliffs, all that would make a forbidding Doré picture, if Nature had not come in and covered up the rugged ugly scars with beautiful palms and trees, shrubs and creepers. When we were there, the summit of Principe was always wrapped in cloud, which would break for a moment to show some great black peak and then close again, as if Nature was reluctant to lift the veil from these fantastic shapes and grim precipices. Below the clouds was the lower mountain, verdure-clad and restful, if it were not for the black cliffs rising sheer from the sea, which the mist could not hide—the cloven hoof, as it were, of the forbidding cloud-hidden peaks of the mountain summit.

Principe looks as if it should be full of goblins and ghosts: it certainly was once haunted by an evil as great as any of them, the *Glossina palpalis*, the fly that carries sleeping sickness. This evil, now banished through the energy of the Portuguese Government and the island planters, and the skill of their medical staff, took heavy toll of human life and profit in the cocoa plantations before it was destroyed.

There are two yearly crops of cocoa in the island. The greater grows from October to January, and the lesser from April to May. The pod when ripe is cut down from the cocoa bushes with a long-handled knife, and is then shelled to extract the cocoa beans inside it. These beans are carried by the numerous little Decauville railways to the factory, where they are dried in large trays and fermented in the same process, to reduce the acid in the bean and improve its quality. Sometimes, as in the Cameroons, there is a special hothouse plant to accelerate this fermentation. When dried the beans are put in sacks for export. The process is very simple and depends mainly on manual labour.

Besides cocoa, Principe grows sugar, rubber, and quinine, and there are a large number of palms on the island which yield excellent palm oil. The food plantations of mealies, yams, and beans, and the fruit, bananas, mangoes, and bread-fruit, growing everywhere, make the island ideal for the African negro, who can have plenty with little effort.

The next day we sailed for San Thomé, which lies farther from the mainland, immediately north of the Equator.

The Portuguese call Principe and San Thomé

"Perolas do Oceano" (Pearls of the Ocean), and they are well named, for their beauty is wonderful and their fertility extraordinary.

San Thomé, an island a little larger than Man, rises from a deep blue sea to a rocky summit several thousand feet above it. Here all but the highest crags are clothed in a dress of glorious green, in which palms and great ferns, creepers, trees, and shrubs, run riot in a soil that is almost pure leaf mould. Blues and greens of every shade, with black rocky hilltops set in drifting clouds—that is my memory of San Thomé from the sea. If a feast of beauty can content you, there will be no disappointment here.

Whatever man may do to disfigure Nature, and he does much when he builds on a beauty spot like this, Nature covers the wound with green bandages, leaving only so little of house or hut that from the distance at any rate she seems to have won in her battle for beauty. Where man concentrates his ugly strength and builds long streets of houses or great factories, and plucks off the green bandages, there only is San Thomé ugly. And her town and port are very ugly! Man has even tried to make the hillsides ugly, by cutting away Nature's home-made green, and bringing in orderly rows of cocoa and coffee plants, where once were only beautiful forest shrubs. But the cocoa trees he has planted take on all shades of colour in the autumn, both leaf and pod, and there is beauty in the coffee plant, so that if the new garden is more ornamental, it is scarcely less beautiful than the old.

The cocoa plantations at San Thomé cease at a height of less than 2000 feet, and above that Nature is paramount again.

When I was at San Thomé in the month of July 1920, and again in December of that year, the dread scourge of Phylloxera was upon the island, and nearly one-third of the cocoa plants had been destroyed. On the higher plantations, 1500 feet above the sea, the disease had been less virulent, but here moulds, due possibly to excessive rain and constant mists, had taken toll of plant and profit. Notwithstanding these drawbacks, the export of cocoa from San Thomé is prodigious, for from little over 100,000 acres of cocoa plantation from 60 to 80 million pounds of cocoa are shipped every year.

There is a large number of well-equipped plantations on the island, and Mr. Johnson, the British Vice-Consul, who was kindness itself to me when at San Thomé, convinced me that, in the economic as well as the humanitarian aspects of cocoa planting, the Portuguese have little or nothing to learn from any other colonial power. The planters are rich, and their "roshas" or plantations well equipped with plant for treating the cocoa, while there are thousands of miles of Decauville railway for its transportation. The native labourers, of whom there are about 30,000 at San Thomé alone, are well fed, housed, and hospitalized, and appear well treated and content.

Round the question of the labour at San Thomé and Principe a storm of controversy has raged. A certain section of the British press some years ago, and a section of the press of Angola recently, have denounced what they called "The Slave Labour of the Plantations."

The truth is this. The recruiting of natives for the cocoa islands takes place not only from Angola but other colonies as well, and is carried out on similar lines to the recruiting for the Transvaal mines, and is under a similar concession. This recruiting department, while financed and organized by the cocoa planters themselves, is controlled by Government, and the recruiting agents are Government officials. The native contracts for terms of two or three years, receives food, clothing, a house, and at least 10s. a month for a nine-hour day, and can earn more than double his wages in bonuses. Every man has a pay-book which can be regularly inspected by a Government inspector or any visitor to the plantations. At the end of his contract, the native has complete liberty to decide as to whether he will stay or not, and the English people I met at San Thomé were unanimous in stating that there is no forced labour or compulsory retention of these indentured labourers.

The Portuguese case, for which I hold no brief but a sense of justice, could be judged on its economic basis alone. The plantations are very rich and the business a very profitable one. It pays every planter, and it pays the Government of San Thomé to treat the native more than well, and attract him to the island, for fear that Angola or other colonies will offer better inducements to retain their native labourers. Every native who leaves the cocoa islands must return to his colony with at least £10 in cash, even if he has been repatriated without having done any work at all. That is the law of the land, but, needless to say, most natives come back to Angola with far more money than this.

On the other hand, I have been told from unprejudiced sources that these repatriated labourers complain that they are not paid in money, but in kind, in cloth or other trade goods. It should be easy for the Government of Angola to refute this, or if true, remedy it. It is also said that some of the labour that goes to San Thomé consists of people who have refused to work or pay taxes in the colony. This is difficult to reconcile with the constantly repeated declarations of the Angolan authorities, that all cocoa labour is free; and personally, I have no reason to doubt the statement of the Portuguese Government officials.

That section of the Angolan press which attacks to-day in violent language the indentured labour of these islands, is undoubtedly interested in the retention of all native labour in Angola. The higher pay of the island cocoa plantations not only induces the Angolan native to go there, but the competition raises his price, already high, in the Angolan market. Every native lost from Angola to the cocoa islands is an economic loss to the colony, and Angola needs every man of her very limited native population for her own economic development.

While one can have every sympathy with the reasons that prompt the Portuguese Angolan settler to abuse the emigration of the Angolan native to San Thomé and Principe, it is easy to recognize a motive which must influence his judgment.

Of the abuse that appeared some years ago in a section of the British press, on labour conditions in the island, I can only say that, while not myself knowing the exact conditions that prevailed then, I know of many Englishmen who hold that it was not justified. The papers that abused the Portuguese slave traffic in cocoa, abused the Belgians years before for their "rubber atrocities." I was then in the Congo, and in a position to know the truth, and we know now that these statements were prompted by Germany and spread by the enemies of England as well as Belgium. It is impossible to believe that any section of the British press would deliberately invent lies about "Portuguese slaves" or "Belgian murderers," but it is undoubted that a certain press, controlled and supported by faddists and Little Englanders, has perhaps unwittingly or from contrariness supported more than one campaign started by the enemies of England. If Portugal, our oldest ally, and Belgium, for whom we have fought, will remember that the best of the British never attack their friends, they can then afford to treat with contempt those who do.

The earliest reference I have been able to obtain of the island of San Thomé is given in *Ramusio's Voyages*. A Portuguese pilot wrote a full and quaint history of a voyage to San Thomé in 1552.

and mentions that this island and Principe were discovered eighty years earlier.

Passing by the Islands of Cape Verde to Benin, this nameless navigator describes how in Benin, on the death of a King, his courtiers were placed in the grave, a deep and wide well with a narrow opening over which a stone had been placed. On every day after the King's death, these men, lying in the darkness of their living tomb, without food or water, were asked if they were serving their dead King faithfully. When no answer came back from the grave, a great fire was lighted on the stone above it, and burnt offerings of animals placed round about the tomb. Sailing on to San Thomé, the old-world pilot describes how wonderful was the sugar-cane of the island, and how delicious the flesh of its pigs. He describes the delights of the potato called the yam, and tells how the natives live to over a hundred years, though suffering much from malaria (of which is given a good description) and even, curiously enough, from venereal disease. There were Portuguese on the islands even then, but their prosperity was not to come for many a year, as first the French and then the Dutch raided the island, and the slaves revolted more than once.

Cocoa was planted, and prosperity came in the nineteenth century.

Five days after leaving San Thomé, the *Mossamedes* steamed into the roadstead of Cabinda, first occupied in 1783. Cabinda, though politically Angola, is geographically a Congo province, for it lies north of the river, a small patch of territory, both in climate and in appearance undistinguishable from the neighbouring Belgian Congo. There are English and French traders as well as Portuguese at Cabinda, and the pallor of the people was enough to condemn the climate of a country which is purely tropical and unhealthy.

A few hours after leaving Cabinda, we passed through the estuary of the Congo. Curious it was to see the yellow water of the river mixing with the green of the ocean, for in places the yellow formed undefined bands in the green, bands crested with scum from the river. The Congo is geologically quite a young river. It has yet formed no delta, and has possibly only just broken through to the sea, from a great lake which it is thought existed where the lower Congo Free State is placed to-day.

We completed the crossing of the Congo estuary during the night, and dawn found us off port San Antonio and the true Angolan coast, facing a landscape different to anything I had seen in any other part of Africa, for here and all the way as we sailed southwards the land of was a reddish colour; near the coast were low hills, and beyond these, yet more hills appeared to rise in the distance. There was no forest coming down to the beach, as one knew it on the equatorial west coast. Here, if the green life of the land did come down to meet the green-brown sea, it was because a river had brought its tree belt with it, while mangroves as an advanced guard stood root-high in the brackish waters of the estuary. The reddish hills were dotted with baobabs, euphorbias, and acacias, with long grass growing between the trees.

It was the dry season, the grass was changing from green to yellow, and there was dust on the trees, giving the picture of an arid coast-line which stretches from the Congo to Benguella, there to grow more desert-like and become a desert near Mossamedes. Yellow grass and dusty trees, the scrub and desert, could only mean a long dry season, while the terraced hills extending far inland gave every hope of a healthier climate approaching that of South rather than West Africa.

To me, with my last memories of Africa, the dense tropical forest of the Cameroons and Spanish Muni, this open country was heartening, for though it did not have their luxuriant beauty, it promised what was better still, a healthier, drier climate, and the chance of seeing game and following it, as one could never do in denser forest.

On 27th July we arrived at Loanda, the capital of a colony of 480,000 square miles, divided into nine great districts. Six of these on the coast, or accessible,—Congo, North and South Coanza, Benguella, Mossamedes, and Huilla,—were under civil governors, and subdivided into "concilhos" and "circunscripsions." Those to the east and interior, Lunda, Moxico, and Cubango, inaccessible and unexplored, were under military governors who ruled military subdivisions called "capitanias Mor," an old name for the command of a Captain-in-Chief. Only some 3,500,000 people inhabit these great spaces, and in some districts as large as England there are but a few thousand.

CHAPTER III

Loanda to Melanje and the Northern Angolan Railway

IT was dusk when the ship entered Loanda harbour, and steamed between a line of cliffs and a long sand-spit to where the lights of a town shone out at the harbour's end. It was night when we anchored, but I went ashore to decide whether to go inland from Loanda by the line to Melanje, its rail-head, or sail south to Lobito Bay, and there entrain for Chinguar, where the Central Railway for the moment ended. From Melanje to the sable country was to travel some 200 miles south-east over an unknown track; from Chinguar, a day's motor ride to Bihé, and thence four days north-east by a wagon road. My ship left in a week from Loanda; the next train in six days. The loss of time was equal, but in one plan lay the hope of a new game country, and the chance of mapping the big sable to the north; so the decision was made for the northern road.

When rowing to land next morning, the cliffs of Loanda seemed red in the light of dawn, and lay ahead like the arc of a gigantic bow, whose cord was that long spit of sand between the harbour

WATERFALL ON DANDE RIVER

[See *page* 41

CONGO DISTRICT, WOMEN MAKING DRESSES FROM BARK FIBRE

KINDLY FOLK AND GOOD MOTHERS

and the sea. At one end of the cliffs, perched on its highest crag, was the fort of San Michel, built three hundred years ago; and from this point to the east, along the line of cliff, were a church, a palace, and a convent, with many other solid, time-worn buildings. These formed the upper town.

Between cliff and sea was a shelving beach covered with shops and houses, the lower or commercial part of the town. Down by the beach the little sixteenth-century fort of San Francisco reminds us of Loanda's past; the railway station and a wireless mast speak for the present and future.

The streets of the town are well paved and laid out, and shaded with trees. The three hotels, all in the lower town, were crowded; and I was glad to find shelter, on my first night ashore, in the house of the Eastern Telegraph Company. This house was in the upper town, and, like most of the older houses in Loanda (there are few new ones), is solidly built, its garden and courtyard surrounded by high walls; as is the case with all the original houses, which were built to hold slaves.

The upper town is approached through good roads; one of them was being cut out of the solid cliff by Portuguese convicts. There is no death penalty in Portugal, and those who have deserved it are sent to Angola, where they are at first employed at manual work in the towns; after a time, if they behave themselves, they are given a ticket-of-leave and allowed to settle in the country, being free if they report themselves when called upon by the Commandants of their districts. Thus some of the settlers in Angola are convicts or of convict descent—a case of Botany Bay once again.

There is now at Loanda a High Commissioner for the economic development of the colony, as well as a Governor-General. In 1920, however, the latter alone was there, receiving me courteously; and when he realized that my visit to Angola was made solely to hunt and photograph wild animals, promised to grant my permit for arms as soon as possible. There have been so many prospectors and company promoters coming out to Angola lately, and so much litigation and quarrelling over concessions for oil, timber, precious stones, and railways, that the Governor was naturally cautious in promising anything till he was sure of my plans.

Loanda has a theatre, several bars, billiard-rooms, restaurants, and a band-stand; and everybody who is anybody collects at the Central Hotel at least twice a day for cocktails. It was here that I met Mr. Virgilio Monteiro, the official dispatcher to the Loanda Customs, a man to whose energy and kindness I owe much. The British Consul, Mr. Bringes, who was busy at the time and unable to help me himself, did the next best thing, by handing me over to Virgilio Monteiro.

In the intervals between helping him to get my guns and kit through the Customs, I explored the native quarters and markets of the town in search of servants. In the markets were a number of sellers, mostly women of Loanda, while the buyers were men of the town, or others who had come down from the interior by train or road.

Though many of the women and men were wearing cast-off or shoddy European clothes, it was pleasant to see that the great majority had not followed this stupid custom, which turns a good black into a poor magpie, and wore either black or striped cotton robes. In the case of the women these were bound tightly round them, tucked in above, just under the arm-pits, and hanging below to near the calves, one hip and leg being left free. The men more often wore just a loin-cloth and a shirt.

The goods for barter were laid out on a "Loanga" or papyrus mat on the ground, sometimes shaded by a large umbrella.

There were not many European goods for sale; Loanda is too full of European and native shops for such wares to be sold in the markets, but the stalls had native pipes, rolls of tobacco and snuff, and much to tempt the native appetite. Here were dishes of food-stuffs, very messy and oily, and dried salt fish; while between them were calabashes of "garapa" or native beer. There were fruits such as bananas and paw-paws, and vegetables like tomatoes, chilli peppers, and sweet potatoes. Everywhere was oil, the product of the palm or the ground-nut.

Among the natives at the markets were those from round about Loanda, Cabindas and other Congo people from the north; and Bailundus, Songos, and Bihé men from the interior. All these people speak the Bundu language, but many of its dialects are so different from each other as to be unintelligible between one tribe and the other.

It was very necessary to obtain servants who spoke or understood some of the dialects of the countries to be traversed and English or Portuguese as well, but the prospect of obtaining any such treasures seemed remote. The twenty carriers to accompany me from the rail-head at Melanje on the expedition after giant sable had been arranged by telegram by the Governor-General at Loanda, who assured me that they would be ready on my arrival at Melanje.

The last day in July was a strenuous one, but with the help of Monteiro all the provisions, camp equipment, and guns were passed through the Customs. The duties vary in the different Angolan ports. In Cabinda there is a 6 per cent. *ad valorem* duty, possibly because goods there would have to compete in prices with those in the neighbouring state of the Congo. In other ports the duty varies, and also depends on whether the goods are of Portuguese origin or come out in a Portuguese ship. At Ambriz the tariff ranges from 6 per cent. to 12 per cent. At Loanda, Benguella, and Mossamedes that on most goods is 25 per cent. *ad valorem.*

My bill was 70 escudos on provisions, which had cost £16, nothing at all on camp furniture and photographic material, 120 escudos on three guns and 500 cartridges, which were priced at their cost value of £50.

At Lobito Bay the guns of British sportsmen may be passed in free of duty, by the local influence of the British officials of the Benguella railway. Of course those who pay duty on their guns can sell them in the country; and this has a certain advantage, as guns fetch a good price in Angola just now, as indeed do all European goods.

Great care is taken in counting every cartridge brought to Loanda, and all are taxed; these precautions are taken to prevent the natives from obtaining arms and ammunition, and giving trouble in the interior.

The 1st of August was mainly spent in getting my licence to carry arms. This document is entitled "Alvara di Licenca para uso e porte de Arma," and gives permission to the holder to carry two rifles and 200 cartridges for each, for the space of twelve months. When obtained, the licence has to be registered in the Administrative Office at the port of entry, as in all District Headquarters which are traversed in one's journey.

The various steps needed to obtain this licence are (quoting from my diary) as follows:

1. Obtain the licence from the office of the "Secretar-General" (Secretary) to the Governor. The cost in stamps is about 2s.
2. Obtain a permit from the local Military General Headquarters to bring the weapons into the country.
3. Register these guns at the "Materiel di Guerra" (Ordnance Department),

where they must be deposited till all formalities have been carried through, and they have been stamped on the stocks.

4. The rifles have then to be registered at the Municipal Offices of the port of embarkation, and all District Headquarters passed through.

On the margin of the licence is a description of the holder and his signature; while on the main portion of the page it is stated that "the person marginally described is licensed to carry arms for twelve months, being responsible for any illegal use of such arms." It further states that the licence must be registered within three days in the "Fazenda" and Administrative Offices of his residence (in the case of a foreigner, his port of embarkation is for technical purposes his residence), and is to be presented at all Headquarters of districts where he carries it. The arms licence bears the signature of the Governor, Headquarters Staff, Ordnance Department, and the Administrative Officer.

Besides the gun licence, a big-game licence should be obtained, the cost of which is 30 escudos (15 for residents). A special licence is required to shoot elephants and certain reserved animals, the cost of which is 50 escudos (25 for residents).

With the help of Hollis, Bringes' assistant, two servants were at last found who spoke Portuguese; a lad called Domingo became my personal servant, and an ugly little fellow was made my cook. Augusto, as he called himself, said he had been cook to the Governor of Melanje—who would surely choose a good chef! He also said he knew a little of our road south to the sable country. In this, however, Augusto lied. With the blundering aid of the newly-acquired servants, my kit had been cleared from the Customs and repacked; and stores, clothes, and cartridges so arranged that no load weighed more than 50 lb., all that a native will carry on a long day's march.

One evening after dinner with Mr. Monteiro and his family, he took a party of us to the Loanda theatre. It was a gala night, and the Governor was there. The building is a modest one, but the acting was good and the audience enthusiastic.

On most occasions there was an excellent dinner to be had at one of the restaurants, and just at this time the company could be relied on to be cheerful, for the town was full of American oil engineers. A very fine lot of young fellows were these Americans, full of go, or "pep," as they themselves call it, and very optimistic about the oil future of the country.

It took three hours at the station on the 4th August to ensure a place for myself and all my stores for that night's journey to Melanje; nor did the train give promise of comfort, for the first class carriages looked cramped, while those for natives were merely covered trucks.

The train was crowded and hot, with eight or ten people in every compartment, meant to hold six. To add to other troubles, Augusto the cook, who was to have helped at the train, did not turn up till five minutes before it started; and Domingo, the other servant, was so excited at this, his first long journey from home, that he broke our only bottle of gun oil over my clothes.

We started at last, but my troubles were not over, for we stopped fifteen minutes later at the upper town station to take a fresh crowd of people into the train. Monteiro, ever my friend, had mentioned me to some people who were travelling in a special carriage, so I found myself invited to share the private saloon of Senhor Eduardo Lorenz.

Sleepless through the dreadful jolting of the train, my night was spent watching the country we were passing, lit up as it was by the myriad sparks that flew from the funnel of our wood-fed engine. The sight was like a Brock's benefit night at the Crystal Palace. The engines only spark like this when climbing under forced pressure, and the chance of setting the carriages on fire is then very real.

By five o'clock next morning, seven hours after starting, we had covered only 60 miles, owing to the steepness of the gradient. All the early morning we passed through open and somewhat arid country, with baobabs and euphorbias as the principal trees, while the ground was covered with grass 3 or 4 feet high. The game round here includes eland, bush cow, roan, kudu, water buck, reed buck, bush buck, duiker, and occasionally elephant.

The Loanda to Melanje line is a Government railway, and was the first in Angola. Owing to wood fuel and the continued ascent to Melanje, 300 miles away, the train rarely travels faster than 20 miles an hour; and though the official time for the journey from Loanda to Melanje is twenty hours, it usually takes much longer.

The line lies roughly parallel to the River Coanza and just north of its main tributary, the Lucala. First following the valley of the Dande River, it then crosses the Dande-Coanza watershed, to approach, 160 kilometres from Loanda, the River Coanza and the old town of Muxima, one of the first posts occupied by the Portuguese in the sixteenth century.

The train had been steadily mounting the hills ever since it left Loanda, and when we reached Cassualola, a refreshment station on the Lucala River, at midday, we were 500 to 600 feet above sea-level. Just to the south lies Massangano, another old Portuguese fort, for many years the main town in the interior.

Where the railway approached the Coanza, and again later the Lucala River, the scenery changed from open to closer forest. Soon after leaving Cassualola, we left the valley of the Lucala River to run up that of its small tributary, the Luimbe—a pretty valley this, between forest-covered hills. The train was now passing through the country of N'gola Cafuxe, whose people had fought the Portuguese during the seventeenth century, and sometimes with success.

The land continues to rise. At the 165th milestone the height is 700 feet. Nine miles farther on, it has risen 1000 feet, and at the town of N'dala N'tando to nearly 2500 feet above the sea. This town, which is now the capital of a district, is also the centre of a fine game country, where bush cow, roan, eland, water buck, and other game animals are said to be numerous.

We were now on a plateau, and from here for the next 120 miles up to Melanje were able to travel much faster, as the country was more level, and sometimes sloped down for a space, as where the train ran down to meet again the valley of the Lucala River. Just before we crossed this river the train reached Ambaca, where we dined at 6 p.m., the hour when due at Melanje, still 90 miles away. For the next six hours the train passed through open forest and grass plain, not unlike the plateau of Northern Rhodesia, to the terminus at Melanje, 3000 feet above the sea.

CHAPTER IV

The March South to find the Sable

NIGHT and candle-light found me up and packing, in the little railway carriage where I had slept, while the day was just breaking when I left it to discover if my carriers had been collected for me by the Governor in Melanje. Of course it was too early to find the Governor up when I went to his house; but when one has waited five years for a hunting trip, it is hard not to wake early.

Facing a square in front of the railway station were the Governor's house and offices, and the houses and barracks of officials and native troops. Beyond these was a little street of shops and stores; and beyond the town were hills which looked purple in the gathering light, except where their summits were turning to rose-red from the first beams of the rising sun. Not far from Melanje jungle commenced again, for white men are only at the beginning of things in Angola.

It was at the second visit that I found the Governor's secretary, for the Governor was away making a new Headquarters for the district, and though the secretary was kindness itself, he told me that the carriers could not be ready before midday. These Government carriers in Angola are paid at the rate of 60 centavos for the first day, 40 for the next, and 30 for each succeeding day, and their food (2 lb. of flour) cost 60 centavos a day when I was in Angola. The cost of a carrier in 1920 was thus not far short of 100 centavos (1 escudo, or dollar) a day.

An escudo at par equals 4s.; when I was in Angola in 1920 it averaged 1s., and as I write, only 6d. At the latter rate the Angolan carrier costs an Englishman less than he would have to pay in most British African colonies, but a Portuguese, what to him is nearly 4s. a day.

As it was difficult to give any exact period of employment for my twenty carriers, the Portuguese authorities kindly allowed me to pay these men on completion of service, with the condition that their pay be sent to the authorities and not given to the men. The natives complain that they see little of the wages earned in this way: that this money is either entirely appropriated by the Portuguese; or that only a portion of it is paid to the carrier, and then in the shape of trade goods bought from merchant friends of the authorities.

There may be some Portuguese officials capable of such petty larceny, but it is impossible to believe that it is practised by the majority, who, though poorly paid, appeared to treat the natives well. The carriers may be influenced to buy trade goods with the money they have earned; such purchases are useful to the Government in encouraging trade and in making the negro, who has thus spent his money, work in order to gain more.

The curse of African Governments is the inherent laziness of the negro, who will not work if he can possibly avoid it. It is absolutely necessary to carry out public works in new African colonies: roads, bridges, railways, and buildings have to be constructed; and without some system of forced or induced labour, European colonization in Africa would be impossible.

In English colonies in Africa such good wages are paid the negro that prices have risen, and the native cannot buy his wife and cattle without earning money. The Portuguese cannot afford such wages, though they are forced to pay them just now. Their normal method of making natives work has been to levy a hut tax ($1\frac{1}{2}$ to $2\frac{1}{2}$ escudos a year) and have some form of forced labour, every District Commandant having the power to commandeer labour at least for Government purposes.

While still waiting for the carriers, a visit to the Melanje branch of the Ultra Marino Bank had increased my funds to 1200 escudos (£60), and brought me several hundred small notes of the value of 20 centavos (2d.), which were necessary for payment on the line of march.

The carriers arrived in the afternoon, and, though too late to march that day, the evening was spent in arranging every detail of the expedition, and carrying out a rehearsal of the duties for the march, so that the start next day, 7th August, could be well made at an early hour.

The loads, which did not in any instance exceed 55 lb. in weight, were allotted in accordance with the strength of each carrier. They were so arranged that the heaviest were the least bulky, for extra weight is in many ways less objectionable than bulkiness in a load. In long grass or bush country, a small heavy box may be preferable to a lighter bundle of awkward camp furniture. If the loads are not carefully weighed and allotted, the older and stronger carriers will choose the smallest, apparently lightest loads, though occasionally the crafty ones thus overreach themselves. I have sometimes allowed a scramble for carefully arranged loads, just to see the baffled look on the face of the over-crafty carrier, who, with the suddenness of his choosing, has found quite a small box to be infernally heavy, while he has left the bulky but light load to a younger carrier.

My luggage consisted of eighteen loads, made up as follows:

1 100-lb. tent . . .	making	2	loads of	50 lb.
1 valise with clothing, books, and cartridges . . .	„	1	load of	45 „
1 box with cartridges, photographic and medical material	„	1	„	55 „
1 box with clothes, books, and cartridges	„	1	„	56 „
1 lot of camp furniture, bed chair, and gun case . .	„	1	„	33 „
1 cook's box, with plates, pans, cutlery, and any opened tins	„	1	„	40 „
4 loads of provision boxes with contents sufficient for three weeks . . .	„	4	loads of	50 to 55 lb

1 load of rice, potatoes, and onions	making	1 load of 30 lb.
2 loads of food for carriers .	,,	2 loads of 50 to 55 lb.
1 load of 2 axes, 1 saw, rope, bush knives, nails, etc. .	,,	1 load of 30 lb.
1 hammock	,,	1 load for two men.
1 giant sable skull and horns .	,,	1 load of 25 lb.

Each of the four provision boxes contained the following provisions :

Two dozen candles, a large bottle of brandy and one of lime juice, small bottles each of pepper, salt, chutney, sauce, and tablets of saccharine ; 1 tin of curry powder, 2 of Quaker Oats, 8 of milk, 2 of coffee and milk, 2 of jam, 1 of corn flour, 4 of assorted tinned meats, and 6 of sardines ; 1 lb. of tea, 1 of sago, 5 each of rice and sugar, 10 of flour, 3 of lard ; and 2 dozen soup squares.

The soup squares and tinned meats were for use on the days when no game was procurable ; the flour, rice, and sugar were calculated at the rate of $\frac{1}{2}$ lb. of the former and $\frac{1}{4}$ lb. each of the latter for my daily use.

It is unwise to leave behind all the many little luxuries which may make all the difference in a tropical climate like Africa, where health is undoubtedly affected by discomfort ; but it is often impossible, in some of the out-of-the-way corners of the earth, where I prefer to hunt, to find enough transport for even the recognized necessities of life, and for this reason my equipment is generally organized into two sections, which plan permits of its division. One section consists of the minimum for emergency purposes ; the other, that which is taken if transport permits. My emergency kit can be carried by five people ; my ordinary safari numbers twenty to twenty-five.

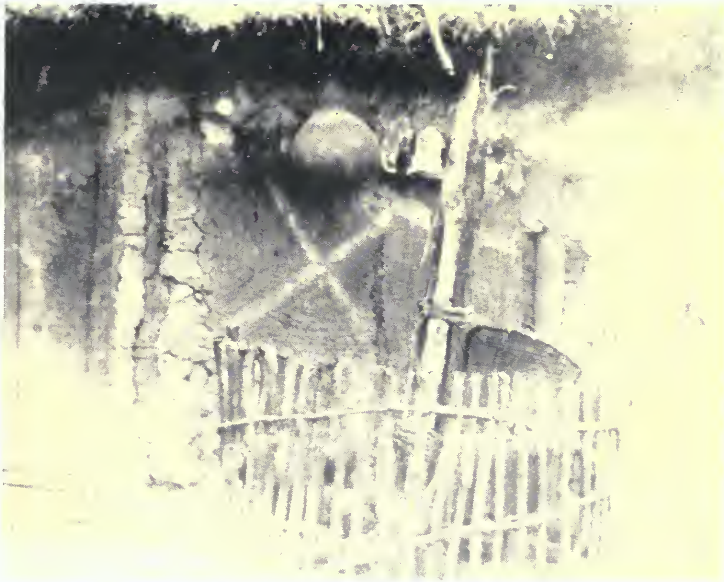
On my Northern Angolan journey I marched with full equipment and twenty carriers, and with five men and emergency kit from Central to South Angola.

My clothing consisted of a soft felt hat, a khaki coat, three strong khaki " bush " shirts with large pockets, and three pairs of strong drill trousers made to loop up into " shorts " during the day, or let down over the gaiters as a protection from mosquitoes and when passing through fly country. With this kit were half a dozen cotton vests, a dozen pairs of strong woollen socks (a size too large, to allow for shrinking), pyjamas, towels, handkerchiefs, and other necessaries, and two spare pairs of strong boots fitted with Phillips' soles. All this personal kit was usually packed in the Wolseley valise made of kapok, which, though only weighing 9 lb., is warm enough to render blankets unnecessary.

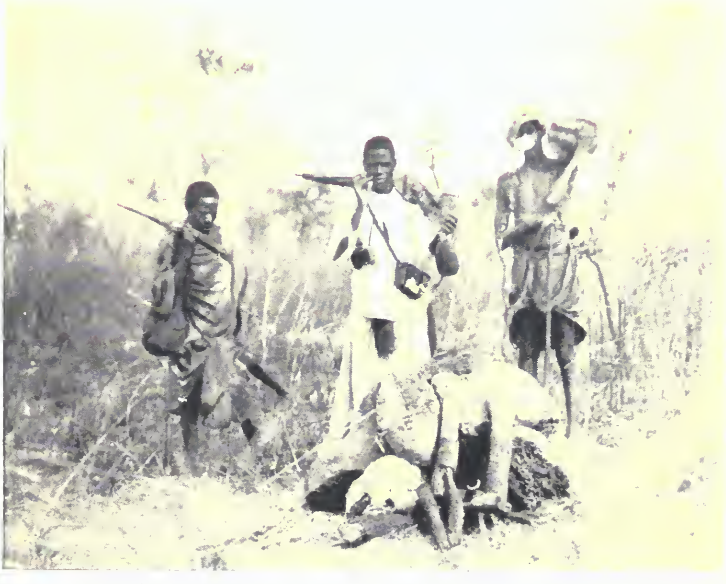
The camp furniture consisted of a light tent (on this trip it was a bigger one than usual), a folding chair, and a mosquito room to erect within the tent, besides a mosquito bed curtain ; on emergency marches the valise and small curtain alone accompany me. My gun included a Jeffrey 0·333 and Ross 0·280 magazine rifle, each with 150 cartridges, a double 0·500 cordite (for emergency and moral support, for I practically never use it), with 50 cartridges, a pair of × 6 binoculars, prismatic compass, books (preferably poetry and works of science), notebooks, and a photographic outfit. The latter consisted of a quarter-plate box " Reflex " camera of my own design.

MY FIRST CAMP IN THE SABLE COUNTRY

DOMESTICS AND CARRIERS



AN OLD HUNTER'S GRAVE NEAR A HUT (UNDER WHICH HE IS BURIED), WITH HUNTING TROPHIES AND CALABASH



BOY HUNTER'S GRAVE, WITH RUDE MODELS OF ANIMALS, AND TWO DUIKER SKULLS SHOWING AGAINST BINOCULARS AND CARRIER'S FACE

It had a 12-inch bellows extension, a front recessed to hold a medium-sized telephoto lens (Ross telecentric 13-inch or Busch 16-inch), yet still capable of accommodating a small 6-inch lens like my big Grandac-telephoto combination, which gave with suitable bellows extension up to 35 inches focal length. There were 30 dozen film packs (plates have been regretfully discarded, as they are apt to break), with sufficient tabloid and compressed developing and fixing chemicals to deal with these films and 100 prints. Two developing tanks and a daylight developing paper bag were carried—as well as canvas water bags to hold cold developing water. To economize water —which is sometimes a precious fluid in the bush —a hypo eliminator like permanganate of potassium was included in the outfit.

The caravan consisted of two domestic servants and twenty carriers, of whom seven were undersized and four of them mere boys. The loads were so arranged that the four light ones were carried by the youngsters and the others by the bigger men. The only two Portuguese-speaking natives were told off to carry the empty hammock, and were under observation for use as gun-boys. Their names were both Coque, so they were called Coque Primo and Coque Secundo.

The cook, Augusto, and the house-boy were each given a rifle, the double-barrelled 0·500 bore and the 0·333 Jeffrey Mauser, while I carried my 0·280 Ross magazine rifle for game on the road. The telephoto camera and case were carried strapped to the hammock.

The giant sable skull which we carried had been borrowed with some difficulty from a trader in Melanje, who said that it had been left with him by a professional hunter who had shot the sable at a place called "Cangandalla," some 15 miles to the south of Melanje.

Knowing from experience how much easier it is to show a picture than describe an animal, I had come prepared from England with a number of photographs of sable and other antelopes, for identification among the natives, but when the sable skull was found at Melanje, I realized how much better it would be to have the real thing than a picture.

We had started, the last load had been lifted, and the road directions given. My heart was singing the song of the open road, and Walt Whitman could not have sung it with more joyousness.

The first marching day of any expedition should be a happy one, and in this case the march was something that had been lived over and dreamed of for five long years. Marching well ahead of my men, I skipped like any schoolboy the moment I was out of their sight; for it would never have done to let a native see one skip.

The early morning of an African winter or spring is perfect in its freshness, and the dawn lights of the African highlands are very beautiful. To see the purple colour of the hills change to rose as the sun rises, and the black of the forests to green as the sunlight touches the leaves, is to live in the land of the beautiful. From grass, leaf, and flower, wet with the dew, comes the scent of freshness; and the cold morning air and the marching make the blood go rushing through one's veins. Then, after four or five hours of marching, comes rest, when the caravan is halted, fires are lighted, and food is cooked; and one confesses that the smell of the breakfast equals the scent from the morning grass.

When the days are getting warmer at the end of spring, or in summer, there is a long halt at midday, in the shade, and if it can be, by a stream, and then the caravan marches again in the evening until camp is reached. Now the tent is pitched, the evening fires lighted, and round them gather careless, happy carriers, who will laugh and sing to the simple music of the "sansa" till long into the night. Sometimes one is too tired to sleep, or too happy, that first night in camp; and then the silence of the forest is so strange that the hunter, who has escaped from the noises of the town, may lie awake to listen for the voices of the jungle.

Marching south-east from Melanje, through some 9 miles of open country, we reached at 11 a.m. the Cuinje River, a tributary of the Coanza; and after lunch, the post Cangandalla, 10 miles farther on, in the afternoon. The streams we passed were at their lowest, for the rains, which had ceased three months before in May, were due again in the coming month of September, and where now were shallow clear streams or even a line of stagnant pools, would soon be a racing and perhaps impassable flood of yellow water.

The Portuguese have a military post with a Chief of District at Cangandalla. This officer had formerly been administrator at Madzamba, in the Cheringoma range in Mozambique (Portuguese East Africa), where many years ago, when hunting near Madzamba, I had killed a number of lions and among them some man-eaters, which had given a good deal of trouble locally. When the former Commandant recognized his visitor, he treated me with the greatest kindness, and did everything possible to assist my plans.

The buildings at Cangandalla were in a wretched state of disrepair, and my friend informed me that the Angolan Government did not spend money on its administration as freely as the privately organized Mozambique Company did in East Africa.

At dinner we had many a good yarn of the old days in Mozambique, and laughed heartily at the recollection of the tricks of one sportsman, who, after poisoning a number of lions, had written a book on his hunting experiences, in which even the photos of the lions suggest death by poison. One of this sportsman's native boys had been with me in 1908, when we came across the mummified carcasses of his poisoned animal baits; and here I was, listening to the story of the Commandant of Madzamba, in whose district and to whose knowledge the poisoning of these animals had been carried out.

It was not done by the famous sportsman alone; he formed a sort of syndicate, the other two members of which, Frenchmen like himself, were more or less professional hunters. One of these poor fellows died of black-water fever; another is said, probably untruly, to have died from the effects of strychnine, through approaching a poisoned and dying lion incautiously and being bitten in consequence. The third probably still lives, famous as a big-game hunter.

After dinner the Commandant sent for the heads or Sovas of neighbouring villages, and questioned them as to the varieties of game in the neighbourhood, and especially with regard to the giant sable; and now the value of the sable skull we had brought came in.

In England I had been told that the big sable was called "Sambakalogo" in the country of the Luimbe tribes, where these animals had been shot by Captains Varian and Blaine the year before. "Sambakalogo" meant nothing to the people of the Melanje district, who could also make little of the photographs of ordinary sable shown them, calling them "Malanka" (roan antelope). The moment, however, the natives saw our giant sable skull, they all said "Kolwah, Kolwah," which is apparently the district name for this animal.

It was not surprising that they mistook my photograph of a 39-inch sable (a good head for Portuguese East Africa, where it had been shot) for a roan antelope, as the shapes of these two animals and their horns are very similar, though the roan does not usually carry horns of more than 30 inches. The giant sable, however, the

"Kolwah," with its 60 inches of heavy horn, could not by the simple African mind be identified with the similar but smaller East African variety.

The Sovas told us that the "Kolwah" was only found south of the Loando, and between that river and its parent stream the Coanza, and nowhere else. They said that the game of the surrounding country consisted of roan, eland (rare), reed buck, water buck, cob, and sitatunga; and that the last-named, which I wished to photograph and shoot, was found in several places in the district, the nearest being the Coque River, which we should pass on our way south to the Loando.

On 9th August, after a friendly farewell from my kindly Portuguese host, we marched first south-west for seven miles and then south-east for another eight or nine, and crossing the small streams called the Hondo, Calumbira, and one or two others, all practically dry at this season, reached in the afternoon the Coque River, a few miles from its junction with the Coanza. Camp was pitched beyond the river, sluggish and overgrown with papyrus, leaving here and there a pool of open water. The flats near the river were carpeted with shoots of grass and reeds that would be several feet high in the rains; and along the edge of sloping banks, which must hold a flood of surging turbid water in the rains, were jungle scrub and a few forest trees. It was such a river as sitatunga love, and that hour of the evening when the animals are moving down from the forest to the river to graze on the young grass, and drink as is their wont before sunset.

Perhaps even more fascinating than the watch by a jungle pool at night, is the walk and watch by an African river at sunrise and sunset. Then and there you may study the ways of the wild animals, and there, if possible, the rifle should give way to the camera, and a desire for trophies to the delight of observation. A good sitatunga head was needed for my collection, as none had yet been seen elsewhere in Africa worthy of it; but I hunted the river bank that evening as much for the joy of watching wild things and their ways as for any hope of a head. And the evening brought its reward; for one after another of the commoner antelopes came down from the forest to drink and sometimes to graze.

A reed buck, a graceful fawn-coloured antelope a little larger than a fallow deer, with short, forward-curving horns, was the first to leave the forest, followed by two does. Soon after, a little duiker, smaller and more graceful than a roe deer, picked his way daintily over the stubble to the water. Not far from me a family of wart-hog, weird-looking pigs with big warts and long tushes on their disproportionately large heads, and little tufts on their quaint upstanding tails, came to the river — the sow fussy, the boar truculent, and both comically anxious for their young, who were wilful and inclined to wander. Far down the river a roan, with the build and height of a hunting cob, was taking his evening drink. Near by, an otter was busy fishing among the reeds.

Dusk was approaching fast, and the hour of the sitatunga, that almost amphibious antelope which lives in swamps, where he alone can walk with his long splayed hoofs and lie concealed with his nose above the water. Rarely seen in the swamps except at night, the sitatunga in undisturbed country may be seen just before dusk and after dawn. It was nearly dark when I saw the first of these animals—a young male and a doe—leave the swamp to graze; they walked clumsily on the hard ground with their long splayed hoofs, so well adapted for crossing a reed or papyrus-covered swamp. It was delightful to watch these rare buck, and stirring to think that perhaps a really big head might appear at any moment. And then I caught a glimpse of a brown shaggy body and a big pair of long twisted horns moving in the swamp; and stalking quickly in the failing light, fired. The animal fell to the shot, but recovered and plunged further where deep water, the dense papyrus brake, and nightfall prevented us following it.

The next day, though we searched the swamp, we failed to find the wounded sitatunga, and on two more mornings and one evening spent by the banks of the river, no sitatunga and very few tracks were seen. We learned that the natives of a neighbouring village hunted these animals by burning the papyrus and spearing them from canoes. Very few remain on the Coque, and in a few years these too will be gone.

The next morning, just before we resumed our march south, one of my men found the decomposing body of the sitatunga. The flesh and skin were useless, but the beautiful spiral horns, which measured 29 inches, were worth keeping, so after cleaning the skull we marched south for some nine hours, 20 miles through an undulating open country with occasional forest, and reached a village called Chimbangue at dusk, where I found two black traders, who travelled in hammocks, already encamped. The younger, who was dressed in European clothes and spoke Portuguese, asked me in an impertinent manner to sell him some venison; he was surprised to hear that English hunters did not sell their game nor give it away, except to their friends or followers.

I like the savage black, and live on the best of terms with him in the bush, and my gun-boys have more than once risked their lives for me; but it is difficult to feel the same degree of friendship for the partly educated negro.

The aloofness of the Englishman towards semi-civilized races like the Indian, Egyptian, Sierra Leonean, and West Indian is no doubt a source of difficulty and even danger to the Empire. These natives may secretly respect us, but they dislike our attitude of aloofness and wrongly consider it one of contempt. They get on better with the Latin races, who, both men and women, fraternize with them, treat them as social equals, and even intermarry with them. I have always thought that the troubles in India and Egypt, which are spreading to the educated negro races in Africa and Jamaica, are as much social as political.

At Chimbangue we came across native graves; one, that of a chief's son, was surmounted by a staff; another, that of a woman, had a broken pot on the mound; while on the third, that of a hunter, were placed the skulls of some of the animals he had shot.

On the following day we left Chimbangue, the first village so far met in Angola with its true name on the map; for as villages are moved on the death of a chief and renamed after his successor, no map can keep up to date. Marching at daybreak next day we reached the Loando River two hours later, and crossed it at a point some 15 miles from its junction with the Coanza. At a village on the north bank of the river were some reed buck horns and the remains of a very big sitatunga head, with horns of nearly 33 inches in length.

The villagers declared that the "Kolwah" or giant sable was to be found a day's march to the south, and sitatunga and cob an hour's march away to the east, where a river called the Luanshesha flowed from the north-east into the Loando. Sending the carriers along by road to pitch a camp at this river junction, the rest of us canoed up the Loando, a deep river 60 to 100 yards wide even in the dry seasons of the year, and navigable for nearly all its course, though a few miles before it meets the Coanza it flows over as a cataract at N'Dongo.

We camped near the junction of the Luanshesha and the Loando, and hunted for sitatunga in the evening. A number of cob, in herds of ten to twenty, were feeding on the open flats by the banks of the river; they were so shy as to be unapproachable within 300 yards. One was wounded, but got away.

These animals looked like Buffon's cob in the distance, but were darker in colour and had bigger horns. They were certainly not red lechwe, and though about the size of black lechwe, had a lighter coloured coat.

The natives said that these cob were numerous along both the Coanza and Loando and many of their tributaries, and that we should meet many of them on our march south. The apparent certainty of obtaining other specimens induced me to leave the cob country and continue the search for the sable. Unfortunately I never again shot one of these animals, and the skull of the cob wounded on the Loando (and picked up two days later) is the only specimen obtained of what may be indeed a new species of antelope, unless it is the animal described by Baum as *Adenota ambuellensis*.

CHAPTER V

My First Giant Sable

ONCE across the Loando we had entered the long and narrow watershed which divides this river from the Coanza, into which it flows. This country is over 200 miles long and from 20 to 60 broad. Towards its southern end and on the Lucé and Lusengo, tributaries of the Loando, the big sable had actually been shot. The nature of the watershed varies; it is over 4000 feet high, hilly and forested, towards the south and the sources of the rivers; only 3000 feet, less undulating and more open, near where the Coanza and Loando join. (See Map at end of Book.)

The natives said that the sable were to be found in all the watershed, and more plentifully towards the south, but not beyond the rivers; and the depth and width of the crocodile-haunted Coanza and Loando made this limited distribution of the sable probable. The question was, were the sable limited to certain forest patches, or were they also in the flats? Did they only browse on certain bushes, as I had heard in England, or did they graze as well? A few sable were reported on a stream called the Rumelia, a tributary of the Loando, to the south-west of our first camp.

and again on the Bungo River, south of the Rumelia.

The best method of finding and mapping out the distribution of the sable appeared to be to make a series of oblique traverses from one river to the other, for in this way the whole of the watershed could be thoroughly explored for the animals. As my map was very inaccurate, we had to rely on compass bearing and native information for direction; but the scheme seemed feasible, and we started the first oblique traverse from the Loando south-west to the Coanza on 13th August, reaching the Rumelia stream after a three hours' march.

Here we camped where a Portuguese professional hunter had stayed for three months, while he hunted for profit in the neighbourhood. During this time the natives say he killed twenty giant sable, five in one day, besides many roan, cob, and other antelope. It was rather bad luck starting my sable hunt in a country so thoroughly shot over.

The villagers declared that all the country between the Loando and Coanza Rivers was the "house" of the giant sable, and in the evening showed me the spoor and droppings of a bull, which were similar to, but a little larger, than those of an ordinary sable. Just before dark we saw two giant sable, apparently young bulls; they were of a brown colour and carried horns about 40 inches long.

The day after my arrival on the Rumelia, while hunting in the forest, we came suddenly on a bull sable about 100 yards off and half hidden behind a tree. The sable's head was on one side of the tree and his hindquarters on the other, his "vitals" being covered by the trunk. Although I expected a big-horned beast, the size of the bull's huge curved horns, which actually showed on both sides of the tree, so astonished me that I lost the fleeting chance in wonderment. When I recovered from my astonishment and manœuvred to take the shot, the sable dashed off and got safe away. It would have been possible to shoot the animal in the hindquarters, but, having already wounded two animals in succession on this trip, I was particularly anxious not to add a third to this number. We followed up the spoor of this sable for some miles, and saw him again when he was running through open forest, 300 yards away, but he never gave another reasonable chance.

The villagers who lived near our last camp brought in a cob's head, apparently the one I had shot two days before; the horns were certainly bigger than those of a Buffon's cob.

The country towards the Coanza River is undulating and forested, that towards the Loando open with plains of short grass and many ant-hills. My information in England was that the giant sable browsed on a particular kind of bush; but the local hunter said they were to be seen grazing in these flats, so we searched them to settle the point, and get, if possible, photographs of a herd in the open.

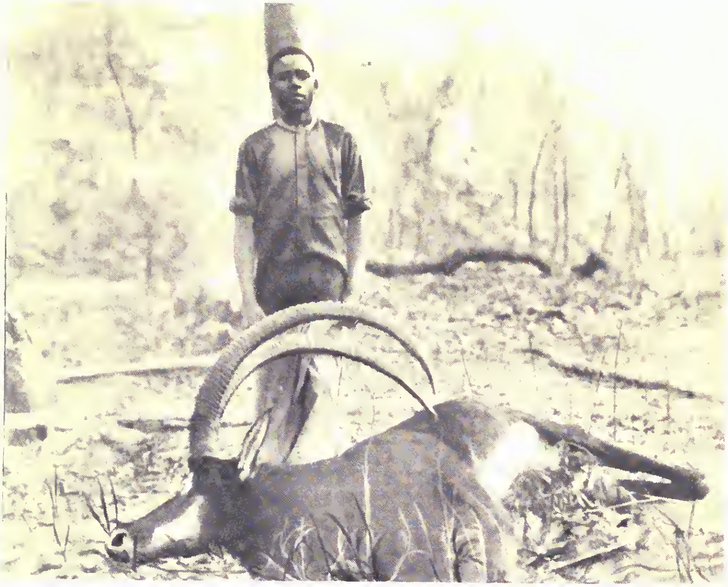
We found a good deal of spoor of both sable and roan in the open flats, and my boys saw a sable bull, the tracks of which we followed up north-east to a stream called the Quitobo, where it was decided to form a flying camp. There were a good many roan and reed buck in this country, a few duiker were seen, and one little antelope that looked like a "stein buck."

The 16th of August was a red-letter day, as it brought me my first sable, and the following is copied from my diary of this day:

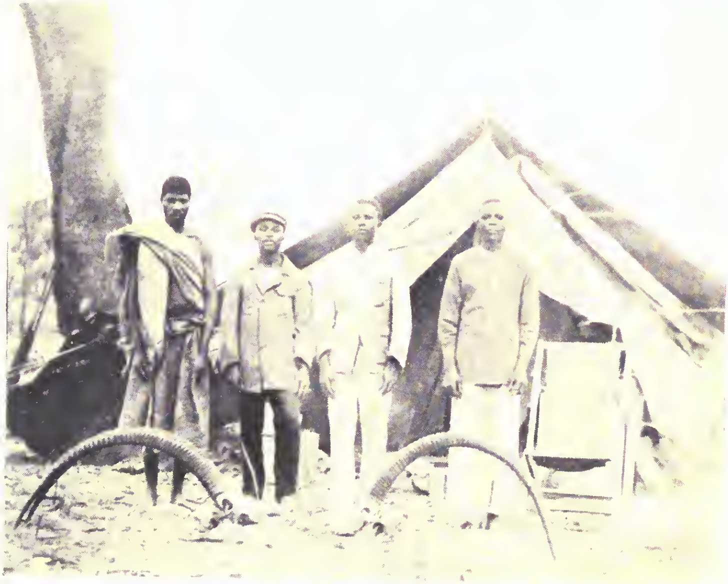
"I left Quitobo camp for the main camp on the Rumelia stream at eight o'clock in the morning and ahead of my caravan. While on the road I saw and stalked a solitary bull roan. The animal, however, was warned of my presence by two reed buck, which whistled so continuously that the roan galloped off. On my way back to the path I saw some twenty or thirty sable antelope. The herd were grazing in open grass land and looked a splendid sight, with the sun glinting on the bright chestnut coats of the cows and the deep black skin of the one big sable bull. It at once struck me how much brighter in colour the coats of these cow sable were than those of the ordinary sable, and how much longer the horns they carried. The horns of the bull sable looked immense, although this animal was the farthest of all the herd from me. The roan which had originally been stalked and lost had run towards the sable, and it was evident that they were alarmed; for the cows were looking around anxiously, and even the bull had ceased to feed. To add to the danger of my presence being betrayed, my old enemy, the reed buck, again spotted me as I crawled towards the sable, and the little beggars began to whistle, telling all the world of the danger. Something had to be done and done quickly. The herd was still 400 yards away and there was little or no cover.

"I stalked rapidly and painfully over the stubbly, burnt grass, but could not safely approach nearer than 200 yards from the herd and 250 from the bull, which was beyond them. At this distance there was a little tree, and standing up behind it I fired at the bull. Partly through excitement, but mainly, as I found afterwards, owing to bad ammunition, the first three bullets missed the sable, apparently going high. Fortunately, the herd could not find out where the shots were coming from, and though restless, stood their ground. Lowering my rifle sights from the 200 yards' leaf to that of 100, I fired again, hit and knocked over the bull.

"With his fall the herd rushed off, sweeping round in a magnificent gallop across my front, some of the animals passing within 50 yards of me, among them a younger bull, which carried a brownish coat and horns of about 40 inches. The wounded bull picked himself up and moved off in the opposite direction to that taken by the herd. He was followed up but could not be shot, as my rifle, which had jammed after every shot, had finally jammed so hard that the breech would not open. Fortunately my boys had now come up, and taking another rifle (the 0·280 Ross) I approached the sable, who was walking slowly

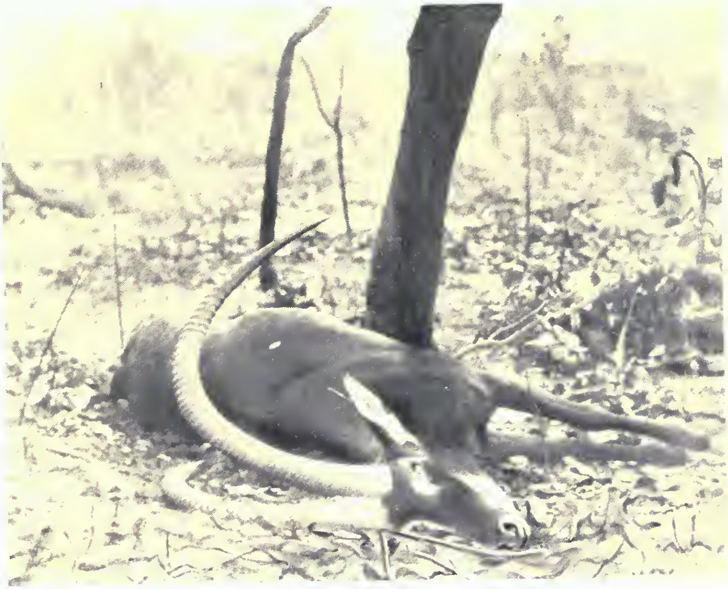


MY SECOND BULL SABLE

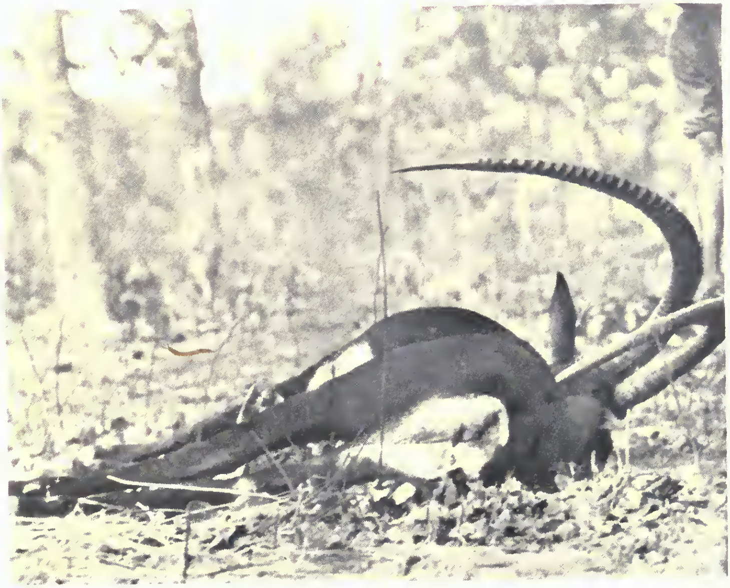


CAMP AND HEADS OF THE FIRST TWO SABLE BULLS KILLED

[*See page 66*



THE 60-INCHER



THE 60-INCHER

[See page 72

away, apparently very badly hit. A shot from the 0·280 at 150 yards again knocked the sable down, and he lay so still that I thought he must be dead, and walked up to him somewhat carelessly. When within some 10 yards, the bull jumped up and charged me, and I had some difficulty in avoiding the sweep of his horns just before he was killed at very close range. The animal had a body as large as that of a roan and much larger than that of the ordinary sable, the shoulder height measured roughly 4 feet 9 inches, and the horns, which were very massive and had little curve, 54 inches. The markings on the face were entirely different from those of the ordinary sable, for, instead of the long white bar from eye to muzzle, the light patch on his face only extended for a short distance below the eye, and was more of a cream than a white colour.

"My gun-boys told me that a still larger bull had gone off to the west, limping as if hit, but though we searched for two hours we could find no tracks of the animal. One of the stray bullets which missed the first may have hit another bull hidden in the grass well behind the herd, but it is more probable that the natives had mistaken the direction they thought the supposed second bull had taken, and confounded him with the animal already shot.

"After skinning the sable, cutting off the head, and dividing up the meat into suitable loads, we marched back to the main camp on the Rumelia, a cheery, singing crowd. The natives were happy in their visions of unlimited meat and beer, and

I was equally happy in the possession of a splendid trophy.

"After spending two hours in preparing the sable head-skin, I went off to see if my luck would hold again, and stalked with just one man along the banks of the Rumelia stream. The evening was a perfect one; the forest was here open and park-like, and in the glades green grass was springing up through the charred stalks and ashes of last year's burnt growth. Winding between its grass and tree-covered banks, the stream, now no longer running, spread out in a series of jungle pools, the haunt of all kinds of birds and small animals. My guide and I walked very quietly down the path which followed the stream, listening and watching for any sign of that jungle life which I felt sure must be plentiful in such surroundings. In turn we saw a red duiker, a genet, what looked like an otter, and a serval. Just before dusk, we suddenly came upon a bull sable, standing and watching us from a burnt patch of forest—looking exactly like one of its charred and blackened tree stumps. He ran off before I could fire, but a lucky shot knocked him over, and a second one killed him. This animal, though smaller in the body than the herd bull shot in the morning, carried a long pair of horns, measuring 56 inches. We left the body of the sable where it lay, after covering it over with branches to prevent carnivora eating the meat and destroying the skin.

"It had been a lucky hunting day, but the good fortune did not extend to photography; for the loss of a screw from the lens brought light into my camera, and fog to the films, of which two dozen were spoilt."

Photography in the African wilds is a very different matter to the gentle art as practised in a colder country, with cold and clean water to develop in. The warm, muddy water, the heat of a closed tent, and the continuous bites of mosquitoes or sand-flies do not help one to turn out the results that can be obtained at home, or on expeditions in colder countries. Only those who have tried to photograph in tropical Africa know these difficulties. The main obstacles to good results in the development and fixation of films are the inconvenience and even danger of working at night, and the difficulty of procuring cold and clear water, or even a sufficiency. The inconvenience of working at night is due to the fatigue after a hard day's hunting preventing efficient film development or causing its postponement. Such delay diminishes the great advantages of the early development of exposed films, and if unduly prolonged will actually destroy their value. This inconvenience and the danger from mosquitoes in night photography can be overcome by the use of a daylight developing tank and bag, but this advantage is counterbalanced by the increased warmth of the tent and water in the daytime, which cause over-development and frilling in films.

Over-development can be checked either in the tank or dish by using a shorter time limit; but film frilling can only be obviated either by using formalin before development (an inconvenient process in the bush when water is scarce), or partly checked by using alum after development, which cannot of course stop any frilling started in the process of development itself. The frilling, which is continued to a limited extent in the washing and fixation of films, can only be dealt with by speeding up these processes as much as possible. The question of the clarity of the water may be met by filtration through cotton wool or linen; and as regards quantity, considerable water economy can be effected by using a hyposulphite eliminator, such as permanganate of potassium, which reduces the amount of washing after fixation.

On the 18th of August, after spending the morning preparing the sable head-skin, while my carriers packed up the camp, we marched south to a new hunting-ground, where I had been assured that the giant sable carried huge heads. This hunters' land of Canaan was supposed to be three hours' march south; but we reached the village and stream where we were to camp an hour after starting. This is typical of Africa; the truth is exceptional, lies the rule. Though annoyed, I decided to camp, and had my tent pitched in the forest, south of a little stream called the Mala, which flows north-east into a larger one called the Bungo.

In the evening I hunted the country to the north-east of the camp, taking two of my own men, and the guide who had insisted that he was taking me to new sable ground, though it was soon recognized to my annoyance as country we had already hunted over unsuccessfully more than once.

The history of the little deception which had been practised on me is so typical of Africa that it is worth narrating.

My guide, who came from the village near the Rumelia stream, apparently had not the authority to let me hunt on the Mala stream; this privilege rested with the Sova (or village chief), who wished to gain all possible advantage in the way of meat and presents which the white man would bring to him. The guide then, instead of telling me the truth, and that it was useless camping in a country the surroundings of which we had explored unsuccessfully, decided to risk my wrath rather than that of the Sova of Mala.

When we came back from my hunting that evening, I sent for both the guide and the Sova, and held a rough Court of Justice. After listening to the confessions of both the native Chief and the guide, who were forced to admit under cross-examination that they had lied with intent to deceive, I dealt out my sentence and punishment, which was that both guide and Sova should accompany me and carry a load of the white man whose time they had wasted. The other men of my caravan, who had sat round in a circle listening to the case, were then asked if what had been said was not true, and what had been done was not just; they all answered with a shout, that it was true and it was just, and chaffed both the guide and the Sova unmercifully for having been caught out in their tricks. Detection is about the one crime that the African native considers really serious. We kept the Sova and the guide prisoners in camp, as otherwise they would have run away, and I should never have seen them again.

Next day, while the safari marched south-west to the Bungo River, I went with two men to the north-west to look for sable, arranging to meet the carriers at the first village we met on the road. While searching the beautiful open forest country, we saw a solitary bull sable feeding in a glade some 300 yards away. I crawled painfully across a part of this open glade, pricked and cut by the numerous small ant-hills and very hard stumps of burnt grass. The sable spotted me when still 150 yards away, so I fired at once, and was fortunate enough to kill him dead with the shot, the bullet hitting him at the point of the shoulder.

On approaching the sable, it was seen that his head was much smaller than it had appeared from the distance. The animal was a small one, and the horns had looked big only in comparison with his small body. They taped just over 52 inches, and were the smallest yet obtained. The shoulder height of this sable was 4 feet 5 inches. Like all the sable killed up to the present, it was infested with ticks, of more than one kind. One variety, which had a dorsal plate coloured with two quarterings of red and two of green arranged alternately, bit me on the finger, raising a painful lump, which remained irritable for many months after the bite.

Carrying the head and head-skin, but leaving most of the meat, we marched to a village called Bunga Calunga, where we arrived at eleven o'clock, and camped some 500 yards south of the stream called Bungo and about half a mile from the village. This river is probably the same stream as the one called Bungo in the Portuguese map of this district, but, like most villages and rivers in this map, is incorrectly placed, flowing some 30 miles north of where it is marked. As far as I can gather, the Bungo stream flows north-east into the River Loando, which it enters near Quitobo camp, where we had spent two days. Into this stream also flow the Rumelia, Quitobo, and Mala tributaries. The Bungo just before it enters the Loando is apparently called the Calu.

The above description gives some idea of the river system as I understood it from the natives, though their information is probably nearly as wrong as the Portuguese map I painfully tried to use as a guide.

We struck camp on the 20th of August, and marched south-east towards a village called Quissonde, where a native hunter who knew all about the game in the district was said to live. On the road we found fresh sable spoor crossing the path, half a mile from where we had left camp. Halting the carriers, we took up the spoor and found it led back to the fields of the village of Bunga Calunga.

In these cultivated patches we found many tracks of what were apparently nightly visitation by sable, which were steadily destroying the crops of the wretched villagers. This decided me to repitch camp, and hunt in the neighbourhood for a few more days.

Leaving my men to arrange camp, I took a couple of natives and hunted the forest for many miles south of the river, and in the direction from which the sable tracks appeared to come; but though we found a good deal more spoor, did not come across any sable. We went out in the evening south-east of the village in a direction where the villagers said that the sable slept during the day. The wind, however, was capricious and gusty, and we saw no sable, though we came across a good deal of spoor, including that of two big bulls. On a grave near the village we found the skull of a sable, and on passing the village itself in the evening, I was shown a small bush near the Chief's house, which was covered with skulls of hares, duiker, genet, ratels, and other animals which I was unable to identify. Tracking, hitherto difficult owing to the hardness and dryness of the soil, should be easier after the first rainfall, which had been threatening for some days.

CHAPTER VI

A NIGHT WATCH: PHOTOGRAPHY AND BAD LUCK

IT was September, the end of the dry season, and the streams were running very low. There was just a line of muddy pools along the bush-fringed bed of the little river. To these pools the beasts and birds of the surrounding country came by day or night to drink. There were tracks of roan and reed buck, duiker and oribi, an old spoor of a sable and of a big bush pig. Just as we were leaving the line of pools, I came across the recent tracks of a lioness. She had come to drink, and perhaps to wait for her dinner. Had she found it; had the little river witnessed one of those jungle tragedies, so terribly common in Africa; had the night seen the stealthy stalk—the rush—the killing—of some animal come down to drink, perhaps from miles away, but finding death instead?

This was the first lion spoor I had seen in Angola, and, the moon being full and the skies clear, it was decided to watch for the lioness that night.

There is something fascinating in the stillness and loneliness of a watch by a jungle pool. It stirs one to see wild life so close, and so unconscious of man's presence.

There is the careful approach of the animal that fears that death lies at the pool, the pitiful pretences made to run away from the shadows, just to make sure that those shadows do not hold a waiting lion or leopard, who may be tempted to make a premature attack. Sometimes one may even see the destroyers themselves come down to drink: lion or panther, serval or hunting-dog. These come down stealthily but fearlessly. There may come to the pool, with heavy movement and unperturbed, buffalo or rhinoceros, or even elephant.

Then there is a happier side of the picture to be seen, more often before dusk has fallen, when some lesser beast or bird comes down to drink and rest. The birds will chatter incessantly. It may be a thanksgiving song for the precious water; perhaps it is just scandal they talk, but anyhow it sounds happy enough. The lesser animals sometimes linger at the waterside, long enough to let one see something of their ways; and when there is a young family with them, and father, mother, and little ones have time to play, the watcher will have the best reward of all.

It is ever a pity to bring death and wounds to scenes like these, and I had never hitherto killed any animal, except lion or leopard, at a night watch.

And now my diary will speak for itself.

"Last night I sat up for five hours for the lioness, sat up alone, 2 miles from my camp, and told my men on no account to come for me unless they heard three signalling shots. My watch was from a platform built high in a tree, from which one could see not only the pool where the lioness had come to drink, but also two other pools farther away, and a little game path that ran by the river bank.

" The chance of the lioness coming to this part of the stream was slender, though she had drunk here twice on succeeding days. But there was the chance that she might come before dark to one of the other two pools, or along the game path, where her movements would be more silent than in the leaf-strewn ground of the surrounding jungle.

" Just before sunset, flocks of doves and guinea-fowl, and birds in lesser families and even in pairs, came cooing and clucking to the waterside.

" At sundown a little duiker antelope came down from the forest to drink, watching every bush and shadow, stopping often, and listening always. Twice feigning fear, he made pretence to run away, hoping, no doubt, to entice any hidden enemy to make a premature attack. Then he came cautiously to the water's edge, drank hurriedly, and went back to the shelter of the forest.

" While it was still light, a delightful family of striped genets, father, mother, and four little ones, came in single file to the pool. One parent led, and the other kept guard behind. These little beasts did not seem as frightened as the duiker. They frisked about in the intervals of drinking, and had a great deal to say to each other. (The genet is so small and moves so quickly that perhaps he has few dangerous enemies, and little fear in consequence.)

"At one of the other pools, a heavy animal, probably a roan antelope, had thrust his way through the bushes to the water, had drunk, and crossed the stream to the forest on its other bank.

"It was now dark, and an owl was hooting on my tree, a tribute to the stillness of my watch; and a nightjar was calling his monotonous, endless note in the bushes near the pool. I had made up my mind not to fire at anything but the lioness, but could not keep from thinking of the big pig track near the pool, and wondering if it might be that of the rare giant hog, an animal hitherto unknown in Angola.

"It was nine o'clock, and bright moonlight, when a heavy animal came forcing its way through the bushes towards the stream. Then a dark object suddenly appeared beyond the pool. From my platform, 30 feet above the ground, the shape was that of a hyæna, with its high shoulders and sloping back, but the colour was not the grey of a hyæna at night. The colour seemed black. I felt very puzzled and uncertain as to what the beast could be, when the recollection of the big pig track came suddenly to my mind. Doubt changed to certainty: the animal *must* be a gaint hog, and my rifle swayed just a little through excitement when the shot was fired. The bullet had struck—there was no doubt of that—for the rush was that of a sorely stricken beast, and a little later there seemed to come from the forest the sound of a falling body, and then stillness.

"It would have been safer to wait for the dawn. The lioness was possibly somewhere near the stream, and to be in the forest at night with her was unwise. Her very presence, however, did but increase my desire to guard this new animal, and what I thought a great trophy, from being eaten by the lioness or other prowling thing that lived on flesh.

"It was difficult work trying to follow in the track of the wounded animal, and one was uncertain how dangerous a wounded giant hog might be in the dark. In half an hour, when only 100 yards of track had been followed, I saw something which looked too dark for a shadow. It was not a shadow. It was a dead animal—a sable—a sable with a small, deformed body. An injury to the hind legs in early life had made them much shorter than the fore legs, and thus given the antelope a sloping back like that of a hyæna or a hog. The horns were close set and small for a sable, though all such horns are so big that it is difficult to understand how I failed to see them. Perhaps it was the darkness, the height of the platform above the ground, or my excitement."

Whatever the reason, a sad mistake had been made, and any big-game hunter will realize the bitterness of my disappointment.

The only animals that any sportsman may shoot at night watches are carnivora, or, as in this case, something which appeared rare and new to science. Here an animal had been killed that was of little worth as a trophy, while any chance of a shot at the lioness had been destroyed for one night at least. The deformed sable when measured next morning was found to be 4 feet 3 inches high at the shoulder and only 3 feet 8 inches high at the rump, and its shape even in daylight was very like that of a hog.

For the next two days I hunted hard for sable. There was only one small herd of eight or nine cows and two bulls in the neighbourhood, and as I myself was tracking, I got to know some of these animals individually. The ground was hard and the tracking difficult, but all the more interesting on that account; for tracking is the very salt of all hunting in Africa, as stalking is the salt of hunting in the hills.

It is easier to approach the larger African big game than wild goat or sheep, or even the deer family in other countries.

To allow some one else to do all the tracking is for the hunter equivalent to letting the American guide, the Indian shikari, or the Scottish gillie, direct the whole of the stalk. Not one of these things is true hunting (though it may be called shooting), and those who do them may be called big-game shots, of whom there are many thousands to-day: they are not big-game hunters, of whom there are very few.

To find and judge the age of a track; to know the animal, its sex, its size, and the way it has moved; to guess its very mood—whether anxious, or uncertain, or tranquil;—this can all be done by patience and a practised eye; while the size and shape, the depth and direction of the track, will each one tell its story to the tracker.

To examine grass and shrub for signs of feeding, and know when game have fed; to study the animal you pursue, and gain a knowledge of the place you hunt in; to follow up a beast, track by track, over earth and stones, through grassy plain and leaf-filled forest, and find the track where hidden under stone or blade or leaf; and then to bring your game to view: that is hunting!

A fair head obtained like this is better far than a record met at hazard and shot with ease.

Chance is a wayward mistress! For two days I had tracked from morning to midday, and from afternoon to well into night, without ever bringing my tracking to the view of a good bull. Cows we came across in this way, and some photographs were obtained, but neither of the two bulls that roamed this country could ever be tracked home. Once I got so close to an old bull, after hours of tracking, that I smelt him, though neither of the two natives with me could do so, nor would they believe that this little gift, which has often helped me in my hunting, was true, till the bull dashed off from close beside us in the bush.

Then came the turn of Mistress Chance, for while walking back to camp in the early morning after my second night of watching, I saw my friend the big bull sable grazing in a forest clearing, a few hundred yards away. The stalk was very easy, and the great head of 60 inches fell to a single shot.

Then came Chance again! The lioness had been stalking too. Had she stalked me or the sable? At the shot she appeared for a moment near me, and then was hidden in the bush. I followed her up for over an hour, but lost her in ground where a soft-footed animal, walking warily, may leave no trace.

We marched again south-west for a dozen miles through open forest and waterless country, to reach Bonji, and a salt river called Longoé, 6 miles from where it joins the great Coanza to the west. On the flats beyond the Longoé River many cob were grazing, like that one I had shot on the banks of the Loando. There were no canoes near our village, and I could not cross the river, so never knew if the cob, whose head alone I now possessed, was or was not new to science.

While we camped by the Longoé, I hunted all the country westward to the Coanza, still a great river, though here a thousand miles or farther from the sea.

Between the Longoé and Coanza there were very few sable; but I found the spoor of roan, reed buck, eland, oribi, and duiker, while, south of the Longoé, cob were always feeding in the marshes.

On the 30th August we marched out from Bonji village, on a road which ran south-eastwards along the Longoé River. Three hours after starting we met a herd of sable, which moved off as we saw them, and I followed with camera and gun. The photography which followed was difficult, as it was the South African spring, and the sun shone fiercely at midday.

It is harder to stalk with a big camera than a rifle, for while one can sometimes allow a rifle butt to trail behind along the ground when crawling on hand and knee, this cannot be done with a frail machine like a camera. My quarter-plate "Reflex" had a length of only 9 inches when closed, but when open with extended bellows and big lens mounted, was nearly 3 feet long. To open up the camera and adjust the lenses was the work of five or more minutes, and once the game was alarmed and moving, as in this case, the stalking had to be done with open camera so as to be always ready for a picture. It was only after two hours' crawling, through sharp stubble and thorns in a torrid heat, and hiding behind every bit of cover, that I managed to take some twenty photographs of the herd. The bull had horns of about 57 inches, a better head than three of those already shot; but I was content with his picture, a far better momento to a hunter of moderate means, than a trophy which took two men to carry for weeks on the journey, and cost a fortune to bring to England and mount.

Photography solves one of the difficulties of the poor big-game hunter, who, with no suitable house of his own, is compelled to store his trophies at great expense or hang them in clubs or museums where he rarely sees them.

The very difficulty of the telephotography of animals makes it splendid sport, and a successful photograph provides a delightful and very portable record of the day's hunting.

The great heat and exhaustion experienced during the day had brought on a sharp attack of fever, and it was with relief that I got back to where camp had been pitched under two immense forest fig trees (mulembas).

The only water in the surrounding country came from a shallow well, where every living thing for miles around—beast, bird, or insect—was compelled to drink. It looked like pea-soup and stank horridly. But though many natives like water that has a taste and smell, all apparently do not do so, for somebody stole my small store of filtered water, so that, with the increased thirst brought by the fever, I suffered a good deal that night. My lips were parched and my tongue dry, but it would have been madness to drink the water of the well without boiling it, and when boiled, the stench it gave off was so foul that my fever-stricken stomach could not tolerate it. At last, by mixing it with coffee—for tea could not hide its nauseous flavour—I was able to prepare a drink which could be taken. For those who have never known what real thirst may mean, or what sufferings it can bring when combined with fever, it is difficult to realize the joy of my first drink of good water, when I reached a spring next day.

We had camped at the village of Cundé Cundé, near the Longoé, but higher up the stream than where we had first met it at Bonji village.

It was while I was still very weak from fever, and hunting to shoot for food, that I met the big bull sable. He was walking along the opposite edge of a forest clearing, and I determined to try and shoot him, as it was too dark to take a photo, and my men were clamouring for meat. Too weak to carry out a successful stalk, I was forced to open fire at long range, and owing partly to a shaky hand, and partly to faulty ammunition, which jammed at every shot, the sable escaped wounded into the forest, where it was too dark to follow.

Leaving camp before dawn the next morning with two men, we took up the spoor of the wounded sable, and followed it for ten hours, the hardest bit of tracking I have ever done. Though one often spoors the elephant for a whole day, this spooring is done with good trackers, whereas here I had to rely largely upon myself—and five years of war and absence from the jungle had made me rusty at the game. We came across blood where the sable had rested, and from the position of the blood-stains to the body it seemed likely that he was only wounded in the neck, a belief made certain by finding blood-stains below a bush on which the bull had browsed, and below where his neck would be when browsing. The meeting with the sable brought us all misfortune, as by leaving and returning to camp before and after daylight, we had missed seeing an invasion of malarial mosquitoes.

Our camp was pitched on a bluff, high above the Longoé River and at some distance from it, but not far enough to prevent nearly two hundred of these deadly insects finding their way into my tent, while several, gorged with my blood, were within the mosquito netting.

We moved camp at once, and I served out large doses of quinine to all my men for several days, but many of us were attacked by fever a fortnight later. (The incubation period of malaria is from ten days to a fortnight.)

In the dry season in Africa, and this applies to Angola, mosquitoes, except near swamps, are never numerous, and these swamp mosquitoes are usually not of the type that carry malaria. Never have I seen such numbers of malarial mosquitoes as on the Longoé River. One of my boys said it should be called " bad river," because its water was so salty; it deserves this name for its mosquitoes, and is one of the most dangerous spots in Africa.

On the great Sabi River in Mozambique I once found a dozen malarial mosquitoes in my net, near where four of a party of five Boer hunters contracted malaria and died; and I have come across bad mosquito countries all over Africa, but never like the Longoé River. I would strongly advise hunters coming from Lobito by wagon road and by railway, to keep well south of this fever country, which is far inferior as a sable ground to that farther south.

The next few days were spent in trying to get photographs of sable, and with hard work and painful stalking some two dozen more pictures of herds and single animals were taken, at distances of from 50 to 150 yards. A bull had also to be killed for food, much to my regret, as it had been impossible to find other game or obtain flour. With a diminished ration, my carriers had become discontented and restless, and if I had not procured meat, would have run away.

Although we had fled from the mosquitoes at Cundé Cundé village, the line of the traverse and our road still lay along the Longoé stream, where we found small villages at three or four points, at one of which I saw the African desire for meat overcome fear of fetish, when a sick village Chief who had been banned by witch doctors from his own village, crept across the forbidden ground to beg a piece of venison. This village, larger than the others, was defended by a stockade of heavy timber built in the old days of intertribal warfare; but these were over, and under the *Pax Portuguesa* the defences were rapidly falling into disrepair.

We camped at a village near a stream called Cummunga, from where I hunted the surrounding country, to realize that along the Longoé was little other game than water buck and roan, and that sable were scarce both here and along the remaining distance of the second traverse to the Loando.

As there was no object in completing the second, we started the third traverse; when, the guide having failed us, I had to move by compass for 15 miles until we reached the Coanza, and nearly as many more on the fourth traverse from this river south-east to the Loando.

There were no villages on the right bank of the Coanza, though many were marked there on the map, the natives having abandoned this bank years ago for the other, owing to severe epidemics of small-pox. Not only were there no villages where villages were shown on the map, but the rivers on it were also all wrongly marked. Two of these, shown as the Zanca and Canda, no one had ever heard of, while another, called the Longoé, which we met and followed for a day's march on our fourth traverse to the south-west, was not marked on the map at all. I called this river the Southern Longoé, to distinguish it from the other mosquito-haunted river of that name which we had met farther north. Near the Southern Longoé we met a broad new road running roughly north and south to join Melanje, with a new post called Chimbango; and following this road for three hours to the south, we came to a well-built Portuguese post, where I found my friend Colonel Cardozo, and two other Portuguese officers, who entertained me most hospitably.

Some 8 miles to the east of the delightful forest-clad hills of Chimbango flowed the River Loando, the goal of my fourth traverse. To the south-west of Chimbango, and some 30 miles away, was the country where Varian had shot his first sable, and where these animals were known to be numerous. I marched there, halting at a Portuguese store called Tetua, about 15 miles from Chimbango, where I arrived late at night without any of my caravan, who had lost their road.

It was at this time that I suffered a very great misfortune, the destruction of most of my photographs. The setting alight of a paper-made dark-room lamp by the fall of its melting candle, not only fogged two dozen films which were being developed, but burnt another three dozen that were being dried. Within a minute I had lost the work of weeks, and probably the finest photo records of big game I have ever taken; but such mishaps all come in the game, and this is the third time in twenty years that I have lost in a moment the work of an expedition. Once in little Thibet my plates fell down a precipice; one box of films lies in the bed of a Central African river, upset from a canoe; but there are not even ashes left of my Angola films.

One of my reasons for approaching the sable country from Loanda by the northern railway to Melanje and the north, instead of from Lobito, the central railway, and the south, had been to map out the distribution of the sable antelope. To this end I had made a series of traverses, or oblique zigzags, across the Loando-Coanza watershed. These had commenced from its northern end, starting from the Loando River, and would take me to the southern limit of the sable country.

The first traverse started from the Loando and the most northern point of the watershed, and took me through a fair sable country to a point 40 miles to the south, where the Longoé flowed into the Coanza. (See Map at end of book.)

The second traverse followed up the valley of the Longoé, which ran roughly south-east to its source near the Loando River. This second traverse, where sable were very scarce, was broken off at a place called Cummunga, and not completed, as information was obtained that a few sable would be met with right up to the Loando.

From Cummunga, the third traverse to the south-west had brought me through 20 miles of pathless bush, where there were no sable, to the River Coanza; while a fourth traverse took me south-east along another stream, called the Longoé, to the new Portuguese post at Chimbango, not far from the Loando River.

The fifth and last traverse to the south-west, which had brought me in some 20 miles, to the known sable country near the Lueé and Lusengo Rivers, was to take me later to the southern end of this country, and to the Coanza at Chuso village; where river fords, beaten paths, and wagon roads led to civilization, motors, the railway, and Lobito in the south.

CHAPTER VII

THE HOME OF THE SABLE—A PLUCKY BEAST—THE PEOPLE MET—THE COUNTRY TRAVERSED

HERE at last was the country Varian had described that Christmas in Rouen in 1917, and here he, Van der Byl, and Blaine had hunted their first sable two years later. One could see readily it was a good sable country, for their tracks were everywhere, and in this land of glade and open forest the sable found not grass alone, but other food which served them when the grass was rank or dry, for in certain places in the forest the quinsollé shrub was plentiful, and in this "sable bush" the animals were more often to be found.

The quinsollé grows, with slender stem and tendril-like branches, eager to climb any support it meets, and giving a milky juice like rubber when bruised. The leaf of the shrub is oval, some 2 inches long and dark green in colour, and the small flower is somewhat like a jasmine.

Another plant, the chinbimburee, which the natives say the sable also loves, is much smaller than the quinsollé, only 2 or 3 feet high, bearing long slender leaves and pods like beans.

In the north I had found that grass formed nine-tenths of the food in the stomachs of the sable, but then it was the time when the young grass was springing up after the burnings; and all animals love young grass. It is likely that at other times the quinsollé and the chinbimburee serve as food for the sable.

It was the first evening on the Lucé River, and an hour before sunset, that we came across the big herd of thirty sable. There were five bulls in all, and one huge fellow; the rest were cows and little ones. The herd was scattered and grazing, half hidden by the trees of an open forest. My one desire was to take a photograph, and replace some of those that had been lost; as the light was fading and there was no time to lose, I started at once to crawl towards the sable with the camera, while the local guide, strongly disapproving of this way of hunting, crept behind me with my gun. The herd kept moving away from us as fast as we could creep on hand and knee, and all this time the sun was sinking lower, the shadows were lengthening, and all hope of taking photographs was slowly dying out.

Then came temptation in the eager pleading of the local guide, who knew only that he needed meat for his village, and who could not understand my losing time and every chance "to point against the sable a long black box which could not kill them." Then, too, I remembered that one sable cow was needed to complete my museum specimens, and I thought, not without misgiving, to kill one that had no young calf; but the question was decided by the big bull of the herd.

He had been behind, acting as a rear-guard, and had grown suspicious of the two curious creatures he had at last seen, and was now watching. Suddenly he left the herd and walked slowly back towards us. The splendid beast had come back to challenge the intruders. With neck arched, mane erect, shaking his head and immense horns, the big bull came towards us and away from the herd. There were young bulls to be shown an example, and there were all his harem to watch his gallantry—and gallantry it was. The bull did not suspect that the two crawling things were men—for no antelope will face man, but he thought we were leopards or wild dogs, terrible enemies in either case; and we might have been lions—worse enemies still.

When 100 yards away, he stopped and began to paw the ground—a splendid sight; and I bitterly regretted the hopeless light and my useless camera. Then something we did, or the sight of my rifle, must have warned the sable that the animals in front of him were men and no battle was possible, for he turned suddenly and looked back preparing, I think, to escape. The horns looked what they were, nearly 5 feet long; and I was after all but the villain of the story, where the sable was the hero; and by these immense horns I was tempted, and fired. The bull walked forward very slowly for a few paces, and then fell —dead. The next shot bagged a cow, but though still the villain, I will say this—while tempted by an easy chance at another cow with what looked record horns, I stayed my hand because she stood over a young calf. The cow killed had no calf, but neither had she a head comparable to the other.

Even after the two shots, the herd would not move off, but stood bewildered and uncertain what to do, and it was easy to realize how one could kill many sable from one herd. Of course, though begged to do so, I never fired again. We watched the herd till dark; watched the mothers drawing the young near them; watched the younger bulls, hesitating and uncertain what they should do; for with the loss of the master bull, another must take his place—"The King is dead! Long live the King!" The horns of this bull measured 59 inches, those of the cow 30 inches; both their skins were in perfect condition, and very suitable for museum specimens.

I hope the reader will not judge me a butcher. In the last six weeks I had killed only a dozen animals of all kinds—a number scarcely sufficient to supply our need in food; during the whole five months of the Angolan trip, my total bag was only eighteen, while in my last half-dozen hunting trips I had not killed fifty animals in all.

It is difficult not to slaughter animals in Africa, as the natives cannot understand why anybody should let off a buck which he could kill; and their desire for meat is insatiable. Then, again, food other than meat is not always procurable, as was the case in our present hunting country, where the villages were small and miserably poor, and food had to be fetched at great expense from Tetua, many miles away. The force of circumstances compels one to shoot more animals than one wants for trophies, or cares to kill, and the greatest force in these circumstances is the discontent of the meatless negro.

The next week was devoted entirely to an endeavour to get photographs of sable; but at this time, when they were most needed, I never succeeded in taking any good ones. One day I took unwittingly a very rare and curious picture, that of a lion, small and out of focus on the plate it is true, but a lion notwithstanding, walking through the grass, looking crestfallen, as if after an unsuccessful stalk. There had been the spoor of lions in the forest, and the sable had been shy, moving much in the past few days, and driven off their usual haunts. When at last I found them, the photograph failed, as the herd hurriedly galloped away just before it was taken. On the film and hard to recognize, so bad the focus, was the lion. My determination to stop shooting and photograph instead had brought trouble in the camp, for the carriers, who had bartered much of the sable meat to the villagers for small and trifling things, now clamoured for more, and were getting mutinous.

Without letting my present carriers know, I had sent back to my friends at Chimbango for twenty-five new ones, and they arrived just when things were at their worst. The arrival of the new carriers was dramatic in its moment. The men realized my power, and begged as hard to stay as they had prayed to go. As they had worked well for me in the past, ten of the best were kept, and the others sent back contented to Chimbango, with full pay and a good present to each one.

When camped on the Lueé River we had hunted all the country between this stream and the next one south, the Lusengo, and all the country round about and up to the Loando River, into which both streams flowed. There was little other game except sable, a few roan and reed buck, and an occasional eland; and though I heard both lechwe and puku were to be found on the Loando, saw none.

The Lusengo is another of the numerous salt streams to be found in Angola. The salt in the stream comes from the soil it passes over in its course, and especially from the so-called salt springs at Chisongo. Near this village the Lusengo flows past a low hill into a small swamp, and the soil in this neighbourhood is so heavily impregnated with salt that the natives are able to extract it readily, by stirring soil and water in a hollow tree trunk, and allowing the salt solution to filter through to another hollowed tree trunk placed below the first one. The "plant" employed is shown on the accompanying photograph.

The whole income of Chisongo village appears to be derived from the salt business, and there are a great many tree-trunk "plants" in operation.

On the 18th September we marched south from Shakashimas, reaching the Lusengo stream near Chisongo village in one and a quarter hour. The Caluando, which flows north-eastwards to the Luimon, a tributary of the Loando, was reached two hours later, and Missongé, from which the villagers had already run away on our approach, shortly after.

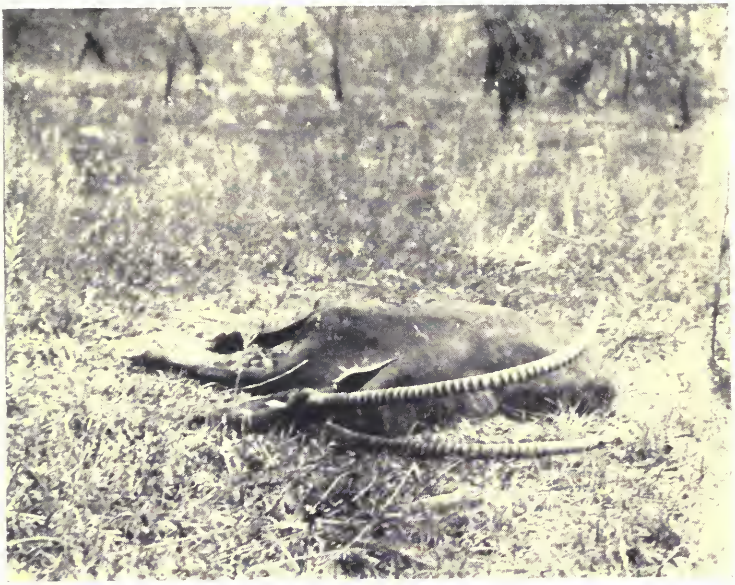
The inhabitants apparently mistook our party for that of a Portuguese official collecting labourers, and when we realized this we approached the next village of Tunda, situated 5 miles higher up the Caluando, very cautiously; sending an advance party to explain that we were merely hunters needing a guide and a little food, for both of which we were willing to pay very handsomely. The Chief of Tunda promised everything, and then ran away with all the men of the village, and we spent the evening rounding up the plantations, trying to find a guide and food. After two hours of cross-country scouting and encircling movements, we captured four women working in a field, and one of them, the Chief's daughter, a very pretty girl too, promptly gave away the hiding-place of her father and several other men.

When the fugitives had been collected and marched back to their village, I told the men that it was discourteous and inhospitable for them to run away from a white traveller, and cowardly to leave their women in the village if they thought we were bad people. The women were shown how unworthy their men folk were of their charms, which they evidently preferred to leave to others; paid handsomely for all the food commandeered, encouraged to keep the money, and give none to their worthless husbands. This little speech was received with roars of laughter from the women of the village and my own carriers, and the presents with still greater enthusiasm. The Sova and the other men of the village remained glum and crestfallen, and were chaffed unmercifully by my men.

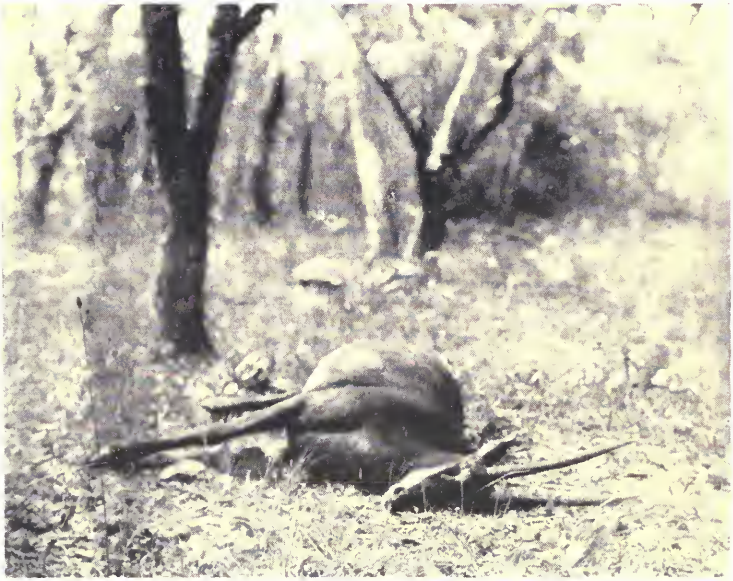
While the rest of the carriers marched direct to a village called Quingombé, two and a half hours to the south, three of us made a detour to the east to search for sable, but saw nothing but their spoor. We returned to find the carriers waiting in New Quingombé, a dirty and shadeless village, whilst only 300 yards away on a hill was the beautiful deserted site of Old Quingombé.

On the summit of this hill grew great mulemba trees (*Ficus psilopoga*), in a circle so regular in outline that the trees which formed it must have grown from the original stockade which surrounded the village, perhaps a hundred years before. Among these trees hundreds of birds were singing merrily, revelling in the wonderful coolness and greenery; while in the dense shade below was a carpet of green grass like English turf. From this hill could be seen, 6 miles to the east and near the Coanza River, another hill with a similar great clump of trees. The natives called this place Mulundu; they said that a native sable hunter lived there, and that opposite Mulundu and between it and Massanga, a village on the other bank of the Coanza, was a wagon crossing whence a wagon road led to Bihé in the south.

The camp at Quingombé was so delightful that we remained there two days; and yet, probably because one Chief had died, this beauty spot had been abandoned by his successor for the

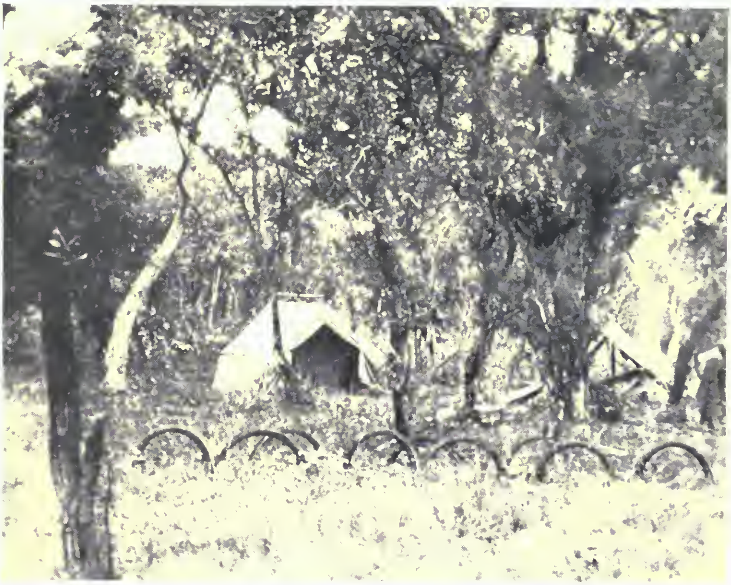


"THE KING IS DEAD! LONG LIVE THE KING!"

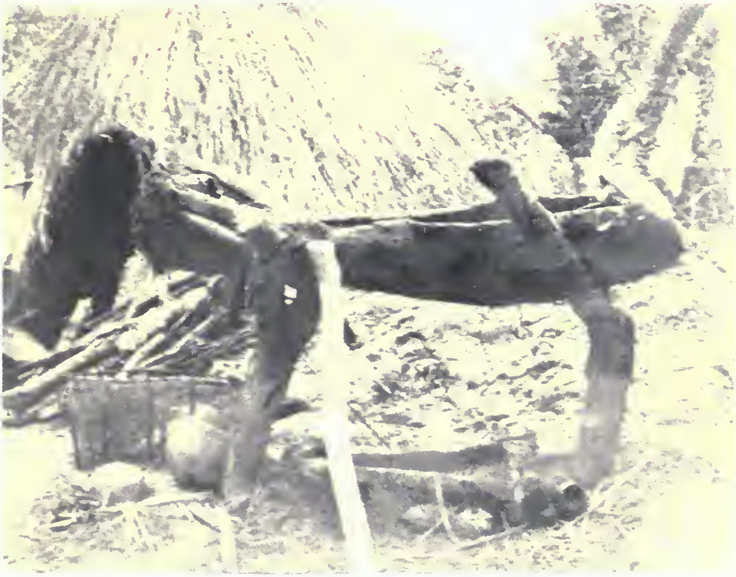


A SABLE COW

[See page 92



CAMP BETWEEN LUCÉ AND LUSENGO RIVERS, WITH HEADS OF SEVEN BULL AND ONE COW SABLE IN FOREGROUND



"PLANT," NEAR CHISONGO, FOR EXTRACTING SALT FROM THE MUD OF THE LUSENGO RIVER *See page 64* new village in a shadeless site in scrub jungle. The afternoon was spent hunting to the south-west of Quingombé, where we saw much spoor but no sable.

A leopard had been taking weekly toll of the calves, goats, and dogs of Quingombé, and the villagers asked me to shoot the marauder, a powerful beast of whom they were very frightened. That evening a platform was built in a tree, and a goat borrowed to serve as bait.

To those who do not know the scheme of night watching for leopards, it may be explained that the best way to get a shot at these cunning animals is to tie up a goat or dog below a watching platform, and near a path the leopard uses in his nightly prowls; for all carnivora prefer to follow paths rather than leave them for the leaf-covered ground of the bush, where their footfall might be heard.

For a village-hunting leopard, it is better to watch near the village itself; for he is less suspicious in the scene of his former murders, and the bait, be it goat or dog, if he can hear his mates, will keep calling out to them. A white or light-coloured animal is more readily seen at night than one of a colour which could be confused with that of the leopard, and shot in mistake for it, a not unusual occurrence. On a moonlight night, a piece of cotton-wool, or phosphorescent paint on the foresight, is enough to ensure good sighting. On a dark night, an electric light attached to the hat, a dry battery in the pocket, and switch on the rifle near the trigger, is my own device for shooting.

When a leopard comes to a bait, it is usually about sunset, at ten o'clock, or just before dawn. The Quingombé leopard never showed himself, though more than once a big silent something moved in the bushes below the tree.

Too tired to continue the strain of a watch as severe as that needed to bag so cunning a beast as a leopard, I took the goat back to its parents at midnight, and returned to camp.

The next day, the 20th September, we marched from Quingombé south-west towards the Coanza. to continue the fifth traverse of the Loando-Coanza watershed, which had started at Chimbango near the Loando, and was to end at Chuso on the Coanza. (See Map at end of book.) For the information of those who may hunt in this region, I will again quote from my diary.

"Leaving Quingombé at 8.20 a.m. we passed by a plain named Sandanbiza, and at short intervals a series of small streams called the Cascella, Futa, Dinba, Cassenje, and Jamba, all flowing eastwards to join the Mazi River, which we reached at one o'clock; and an hour later, Cavé, a large village on the hills above the Mazi valley. The hills on which Cavé stood must be 5000 feet above sea-level, and the highest point we reached in the Loando-Coanza watershed. After leaving Cavé we marched south-west down to the Coanza valley, camping at a village two hours later. The next morning, another 1½ hour's march brought us to the Coanza River. opposite Chuso village, where there is a ferry."

The journey through the sable country, carried out in five traverses of the Loando-Coanza watershed, had now been completed. The first traverse from north to south, starting from the River Loando, had ended at the Coanza where it is joined by the Longoé. The second, from this point south-eastwards, was broken off at Cummunga and before the Loando was reached. The third was from Cummunga south-westwards to the Coanza; the fourth, south-eastwards from the Coanza to near the Loando at Chimbango post; while the fifth and longest traverse had been from this post to the Coanza at Chuso. These five traverses had been made through a watershed some 200 miles long, tongue-like in shape and varying in breadth from 40 miles at the base of the tongue to 20 or so at the broad tip, where the Loando joins the Coanza at an obtuse angle. The slope of the country is from south-east to north-west, and from some 5000 feet at the Loando source to just over 3000 where the rivers meet. Owing to the slope of the land and the narrowness of the Loando-Coanza watershed, nearly all the tributaries within it are small, and most of them flow in a sort of herring-bone pattern north-west to the Coanza and north-east to the Loando.

In my first traverse, from the Loando south-westwards to the Coanza, the three streams crossed were the Quitobo, Rumelia, and Bungo, all flowing north-east to the Loando. The second and fourth traverses were made along the course of two tributaries of the Coanza, each called the Longoé, and in the third traverse between them I had crossed over small streams flowing north-west to the Coanza. In my fifth and longest traverse, from Chimbango near the Loando to Chuso on the Coanza, three rivers, the Lucé, Lusengo, and Caluando, and five small tributaries of the Mazi, which had been passed, all flowed north-eastwards to the Loando. The traverses had crossed most branches of the herring-bone-pattern drainage of the Loando - Coanza watershed. This watershed is comparatively sparsely inhabited, in the north by the Songho tribe, and in the south by the Luimbes.

The destruction of the power of their Chiefs, and the great mortality caused by epidemic small-pox thirty years ago, have done much to diminish the number and alter the character and customs of these people. The Songho villages were small and wretchedly built, and there were no big Chiefs and few witch doctors to impose the older and more dreadful customs and ceremonies on their people.

Beyond an occasional dance, and one funeral ceremony similar to that seen elsewhere, there was little to remind one of what Douville, the French traveller, described when on a visit to these people a century ago. He states that he found it difficult to pass through the Songho country without bribing them and consenting to the sacrifice of animals, the blood of which, mixed with ashes, was used to anoint the feet and head of the travellers.

Speaking of the funeral ceremonies of the Sova or Chief of Catenda on the Coanza River, Douville describes how the mourners danced and shouted.

draped in vines and carrying sprigs of leaves, how the witch doctor sacrificed a goat before the dead Chief's house, and after mixing its blood with palm wine in a boiling pot, commenced to incant amid the smoke of the fire. Working himself into a frenzy, he rushed into the hut where the dead body lay, and soon after spoke, as if with the voice of the dead man, who thanked the people for their remembrance of him. The hair of the late Chief, with the nails of his fingers and toes, were then distributed among the people.

The arms of the corpse were so placed that the hands rested one on each side of the face, with the thumbs under the chin, and the little fingers near the eyes; the knees were drawn up, and on the body were placed charms and fetishes. The body was wrapped in blue cloth, placed in a net hammock, and carried to the grave, amid a procession of his people, some of whom carried spears and others garlands of leaves; while the chief mourners wept loudly, and the drummers beat a slow march on draped drums. The dead Chief's widows, who had washed themselves in a stream into which a pig's head had been thrown, followed the bier amid many other women.

After the body had been laid in the grave, the people ran round shouting and throwing mud and stones into it until filled, and a mound had been formed, on which was placed the Chief's hat of office. This done, the drums were undraped and the procession marched back to gay tunes and dances, to feast, drink, sing, and dance all night.

At midday the next day the people came

together to elect their new Chief, around whose neck the collar of chiefship was placed by the eldest noble, who, presenting the Chief with a cup of poison, summoned him to swear upon it an oath of just leadership to his people.

There is much in all this that resembles our own funeral and coronation ceremonies.

Douville described the Lemba tribe, who inhabited the country near the Cunhinga River, as inordinately superstitious, and under the influence of their witch doctors. They sacrificed human victims to their superstition and lust of blood, and reverenced spirits, especially those of lightning and of health.

On the death of a man, his principal wife stood near the corpse, while she sang the song of the dead; though should the body be that of the wife, the husband stood silent. At midnight an animal was sacrificed, and its blood placed in a vessel near the corpse as an offering to the gods. This blood was then partaken of by the relatives as a sacrament. The night then ended in rejoicing, the dead man being asked to intercede for his relatives in the other world, and procure them houses and wives in a Negro heaven of shady forests and limpid streams.

On the second day, the dead man's fetish images were placed round his body with food and wine, and the spirits called on to witness the completeness of the sacrifice.

At midnight another animal was sacrificed to the spirits; and on the third night, when from the advancing putrefaction of the corpse it was assumed that its spirit had left, it was carried to the grave in a hammock, wrapped in blue cloth, with food in its hands and fetishes on the body. When the burial was over and the grave adorned, the mourners came back to feast, dance, and sing their last farewell to the dead, whose house they now burned.

Widows were compelled to purify themselves by purgation and bathing, and isolate themselves in huts in the forest for the space of two moons, before they could re-marry, which they rarely failed to do, especially if they had children, who were looked upon as a source of wealth and a dowry.

Among these Cunhinga people circumcision rites were practised within a year of birth; and after the child had been cured, it was carried to the fetish hut of some particular spirit, to whose protection it was committed.

Like their neighbours, these people of the Cunhinga were very superstitious, consulted their gods before any important event, and made sacrifices, even of human victims, to propitiate the spirits they feared. Their most potent weapons were arrows poisoned with leaves of a plant, which caused rapid muscular paralysis; and of their beverages, one, made by infusing and fermenting the wood of a tree called "inka," was strongly intoxicating.

CHAPTER VIII

Crossing the Central Plateau of Angola

WE left the sable country, and commenced our march across the Central Angolan plateau on the 23rd of September, when we crossed the Coanza, first its line of marshes, and then the main stream near the village of Chuso. It took my caravan about an hour and a half to cross the river, which even here, 1000 miles from the sea, is deep and 100 yards across at the driest season of the year.

In the rainy season, when the Coanza overflows its banks, the flooded lower lands and marshes must form a lake in front of Chuso village.

From the Coanza, here some 4000 feet above the sea, our march lay south-westwards through rising hill and valley, past Belmonte, in the Bihé country, with an altitude of 5400 feet, to Chinguar, where the Central Angolan (Benguella-Katanga) Railway ends, and the plateau reaches nearly 6000 feet in height.

Leaving the Coanza, our road rose slowly by winding path, through glade and open forest, and crossed the watershed between the Missimoi River, flowing to the Coanza near Chuso, now behind us in the north, and the little stream of the Vimboi, which joins the Coanza farther south.

On the first day's march, some 15 miles, we crossed three streams and passed three villages, before we camped at Almafodas store. From here, a motor track—an hour's walk—led us to the great motor road, 150 miles long, which, starting from Neves Fereira on the Coanza, 15 miles south of Chuso, passes through Belmonte to Chinguar. Along this road we marched for 20 miles, past a store called Camacupas and two others, then the rising town of Catabella, and camped at dusk an hour's march beyond it.

A wagon track from Bihé runs near the motor road, and on the track the Boer settler of the plateau may be seen slowly driving his long span of sixteen oxen, while a motor-car may pass him, moving at ten times his oxen's pace.

Five miles west of Camacupas, a wagon road ran northward, I was told, to the Coanza, and its crossing at Massanga. Any hunter of the sable, coming from Bihé by wagon, might take this track to cross the river there.

The third day's march was over a country of open hill and dale, like the high veldt of the Transvaal, but better watered with clear mountain streams; that evening we reached Belmonte (Bihé).

We now had crossed 50 miles of the plateau, while 80 miles of still higher and more open country lay between us and the rail-head at Chinguar. At Belmonte I was forced to stay a day, as the carriers, engaged to this point only, refused to take me farther till doubly paid.

Though there has been trade at Belmonte for over fifty years, and the little town lies close to the track of the on-coming Katanga Railway, it does not show at present the promise of its future. The two hotels are bad, the dozen stores are lifeless, and there is a listless look about the population. There were but three motor-cars to make use of the splendid motor roads the Government has built, and the charges of a car journey were prohibitive.

The traders of Belmonte appear to make little commercial effort. The decreasing value of Portuguese money has much to do with this, as it must be difficult to carry on business in a coinage which depreciates every day. The curse of the speculative spirit, which waits for benefits to come from the efforts of others, and a rise in value of field or forest bought cheaply, with a view to sell at profit without work, is the more serious factor in the situation.

From Belmonte to Chinguar we did some strenuous marching, when 80 miles were covered in three days. The land was open hill and dale, like that we had left behind us, and we marched past several streams. These were the head waters of large rivers like the Coquema, flowing south-east to join the Coanza, and the Cuchi and Cutato, on their way to the Cubango.

It was late at night when we arrived at Chinguar. We had then marched for six days, and covered 120 miles of the great Angolan divide.

While the highlands of Angola in general form the main watershed between those two mighty rivers, the Congo and Zambezi, their central portion, bounded by the Coanza on the east and north, sloping gently to the Cubango and the

Cunene in the south, and abruptly to the westward and the sea, divides more particularly the Coanza from the Cunene and tributaries of the Zambezi.

Rare it must be to find in any country the source of so many great rivers, confined within so small a field, yet flowing to seas so distant from each other! The Cunhinga and Cutato, rising close to each other, join the Coanza some hundreds of miles apart; and the Coanza itself, which flows to the Atlantic, rises near the Cubango and Cutato, branches of the Zambezi, which river once poured its great flood into the Indian Ocean.

The Cuvo and Cunene, two other rivers rising near the township of Huambo, flow into the Atlantic Ocean very far apart. The rivers flowing northward from the plateau cut their valleys deeper than those flowing to the south, and give better power for irrigation than these sluggish southern rivers, with their swampy, shallow valleys.

In these well-watered highlands, 5000 feet and more above the sea, with a temperature of 60 to 80 degrees Fahrenheit, and a rainfall of over 40 inches, there must be a future for the white man. There is little malaria in the country, and on the plateau I saw neither malarial mosquito nor tsetse fly. Rinderpest has been absent for years together, and lung sickness is the only serious animal disease.

Though cereals and stock do well, few but natives are farming; yet, by crossing pedigree stock with the hardy local race of cattle, there should come a breed fit for the meat markets of

Europe, which are closer to Angola by sea than most other parts of Africa. This should be a cattle country, for if Europe failed to give a market, the rich Congo colony would always need great quantities of meat.

If the Portuguese would but colonize the country, or leave others to develop it, Angola would be a second Argentine. Some effort is being made at last to encourage such development; fair land laws have been lately made, of which the details are given in Chapter XX. These laws allow a settler to take up 100,000 acres at a rent of only a halfpenny an acre, and to hold it without tax, if 200 times the rental is spent within two years. If not, a graduated tax has to be paid.

There are several native tribes in the Central Angolan plateaux. The chief among them are the Bihénos, who live round Belmonte; the Bailundos, who live to the north of them; and the Ganguella, who live chiefly in the south-east and south-west of the Bihés.

This Bihé plateau shows how rapidly Africa is altering her appearance, her fauna and flora, through the march of civilization.

A hundred and fifty years ago this country, which to-day consists of bare and breezy uplands, cultivated, built over, populated, and practically gameless, was a forested region and a paradise for game, occupied by a few Ganguella villagers. Soon, and this future is not far distant, the railway which already reaches Chinguar will have passed through Bihé; Belmonte, its capital, a township even to-day, may have grown to a city placed on the great iron highway from the rich Congo copper fields to the sea at Lobito Bay.

The very history of Bihé and its people is a romance.

On a visit to a village of the sparse Ganguella people, came a beautiful maiden from the Zambo tribe, who live near the Loando River (the giant sable country) to the north. Her name was Cahanda, and her father was chief of the Gambas, and called Boma. From the southern land of Humbé, and in pursuit of elephants, which he was following up the Cunene River, came a son of the Humbé Chief, a mighty hunter called Bihé, with his band of fellow-hunters. The two young people met at the Ganguella village, and Bihé wooed and won Cahanda. After conquering the Ganguellas, Bihé built himself a banza, and founded a kingdom. The father-in-law, the Chief of the Gambas, being won over, sent his people south from the Loando to help Bihé.

The race of the Bihés is thus a mixture of the Humbés of the south, the Gambas of the north, and the original Ganguellas; but the great slave traffic, which passed through the Bihé plateau, has brought about a further mixing of peoples, and the character and physique of the Bihéno is probably as much due to the vigorous air and pure water of his uplands as to his racial descent. There have only been some six generations of the Bihé since the foundation of the tribe 150 years ago.

The Portuguese obtained their influence in this country in a curious manner. One of the

Bihé Chiefs, jealous of a brother's popularity, sold him as a slave, when he accidentally fell into the hands of the Portuguese at Loanda. The growing unpopularity of the Bihé Chief caused the people to send for the brother, and the Portuguese Governor, seizing his opportunity, not only freed the princely slave, but helped him to regain his kingdom, and in doing so established a new Portuguese commercial centre, that of Belmonte, the present capital of Bihé.

These Bihénos are by nature traders and travellers, and through Portuguese example they have learnt the value of commercial travelling. They quickly learned this trade, purchasing goods at Benguella to sell them to distant tribes, who readily exchanged valuable ivory and slaves for any worthless European goods brought them.

Carriers are nowadays obtained in the Bihé country through the Government or European traders, but a few years ago they could only be obtained through the Chiefs, by giving presents, or recruited by volunteers from the natives. In the Bihé, the merchant engages carriers in groups, led by a chief carrier or "pombeiro," who may speak a little Portuguese, and negotiates the terms on which the men engage. The carriers are paid a wage rate in proportion to the distance travelled. They have to be fed on the journey, except for the first three days, when they feed themselves. The Bihé carriers and their pombeiros have traversed most of Central and South Africa, and an old Bihé porter has usually a wide knowledge of the continent.

The story of the voyage of two pombeiros across Africa from 1801 to 1811, described in the Portuguese colonial records of 1842, is a remarkable account of a wonderful journey.

The Bihé, though a vigorous, intelligent, and fairly hard-working race, bear a bad moral reputation, being vicious, cunning, and cruel, the result probably of their slave-trading and commercial dealings. They have more idea of a future state than most African tribes, ideas possibly influenced by their contact with Europeans, but are really in the hands of witch doctors, like most negroes. The avarice of the Bihénos is well illustrated by their method of fining for all offences when they governed the country. This "mucano," as it is called, was extracted under the most flimsy pretexts from the native, as it was from the European trader till the Portuguese definitely took over the country. As the offended parties were allowed to form themselves into judge and jury, the accused had no chance of escaping his fine.

Before the Portuguese occupation, the Bihéno form of government was similar to that of other African tribes, probably a little more elaborate, owing to their greater intelligence. The Chief or Sova had his Court of "Macotas," who were courtiers and favourites rather than counsellors, and had little influence on any decision made. A custom among the Bihé people was for the Sova to have a fool or jester, as he also had a personal A.D.C., who collected the royal spittle, but only to cast it out of doors, and not anoint his own or any other head with it, as was formerly done among some of the Congo tribes of Angola.

The burial rites of Bihé Sovas were similar to those of Chiefs of other tribes, in that the dead lay in state for many days. The body, however, was not smoked or preserved, but allowed to decompose and fall to pieces in the hut where it lay. The Sova's death was not announced until such time as the head of the corpse fell off the body.

The death rites were only then carried out. The hut in which the body had lain was demolished, and the body buried, wrapped in an ox hide, under the floor of a hut in the royal enclosure. The death rites in the old days included maltreatment of any strangers who were in the country, and on the appointment of a successor to the dead Chief, two heads, one of an antelope and the other of a human being, were needed for the coronation ceremony.

The Bihé people are practically vegetarians, as they do not eat cattle, and there is too little game in the country, especially since the outbreak of rinderpest, for venison to bulk largely in their menus. That they like meat is evident from the relish they had for the buck meat which I shot for them; and they occasionally eat domestic pig, even when the meat is putrid, and will eat dogs, rats, and even lizards and ants on occasion. They have never been ordinary cannibals, but in earlier days at their ceremonial feasts, called "guissunges," human flesh was eaten mixed with that of other meat.

CROSSING THE COANZA RIVER AT CHUSO VILLAGE

THE OPEN HIGH PLATEAU

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THE OLD TRANSPORT METHOD—OX WAGONS

AND THE NEW—BENGUELLA-KATANGA (CENTRAL ANGOLAN) RAILWAY

They are great wine-drinkers, using beer made from Indian corn and fermented by a kind of hops. This "capata" is made by boiling maize and hop seeds for several hours; it is not very intoxicating, and I have found it sustaining. If honey or sugar is added to "capata" a good deal more alcohol is produced, and this "guisanga" is very intoxicating.

The older-established villages show strong stockades, constructed at a time when these tribes were constantly at war with their neighbours, but since the Portuguese have destroyed the power of the Chiefs, and stopped all intertribal wars and the carrying of firearms, the fortification of villages has ceased.

The plateau which has been described in this chapter, continues for another 200 miles and more towards the sea. The long road which crosses it from Central Africa to Benguella, and over part of which we had marched for so many days, has seen many changes, and will see more before this century is over. It was once the track of the slave traders, who for centuries followed this road from Central Africa, through Bihé to the slave markets at Loanda and Benguella, where slave ships awaited their cargoes for the Indies and Brazil—in very truth a road of suffering and hideous cruelty!

Along part of this road came Livingstone, who did so much to destroy the slave trade; on it Cameron, Capello, Ivens, and Serpa Pinto, each in turn, took up and carried the torch of hope and mercy which Livingstone had lighted.

To-day, a motor track is where the old slave path ran; and beyond Chinguar, westwards, the steel rails run over 300 miles; while to the east and the centre of Africa they are pushing their way, a sign to all men that the peace of civilization has come at last and to stay.

CHAPTER IX

The Central Angolan Railway

IN the last chapter I have told the story of the great hunter Bihé, who came north hunting elephants in the central highlands of Angola, to meet there a wife and found a colony.

A hundred and fifty years after, came a resolute, far-seeing Scot, Robert Williams, to plan and build a railway, which, passing over the highlands of Angola on its way to Katanga, the richest corner of the earth, is opening up another colony, that of the white man.

The story of Williams the engineer and the Central Angolan (Benguella-Katanga) Railway is as great a romance as that of Bihé the hunter and his wooing.

One of that group of great-hearted Britons who have done so much, and against great opposition, in Africa, for their country, Williams went to South Africa in 1881, to become the friend and helper, first of Rhodes, and then of Jameson, in their great schemes for the extension of British territory to the north, and the Cape to Cairo Railway. Thanks to Rhodes and his friends, Rhodesia became British, but the Cape to Cairo scheme by Lake Tanganyika and the "All-Red

Route" fell through, owing to German opposition. Rhodes turned to Williams to find an alternative route through the friendly country of the Belgian Congo, an alternative rendered commercially advantageous by Williams' and Grey's discovery of the immensely rich Katanga territory, through which the line could pass on its way to the navigable Congo, and thence by a short line to the navigable Nile. Williams overcame the political difficulties, but was temporarily unable to supply the financial needs of the new route.

In the enforced interval, unsupported and undaunted by the check, he sought, found, and obtained the concession for a western gate and railway avenue to his El Dorado of Katanga, a shorter railway route and avenue than either the southern, which ended at Cape Town, or the eastern at Beira. He had ensured a quicker sea journey to the markets of Europe than was possible for Beira or Cape Town, and avoidance of the heavy Suez Canal dues which an East African port must face.

Williams had found for the seaward gate of this western railway avenue the greatest harbour of West Africa, Lobito Bay; had wrought even better than he knew, for he had not only initiated a great commercial and strategic railway and harbour scheme, but forestalled Germany, to whom, in its blindness, the British Government had apparently, as far back as 1898, bequeathed its political interests in Angola.

Through the friendship of the Portuguese Government the wisdom of King Leopold of the

Belgians, and the backing of Portuguese, British, and Belgian friends, this enterprise has passed from endeavour to success, to the better prosperity and friendship of three friendly and allied nations, Britain, Belgium, and Portugal.

There were rumours of rich finds of copper in the Katanga region when in 1907 I crossed the Congo hinterland, intent only on hunting and happy at getting away for a little from the unceasing toil of scientific work. I did not dream that within a few marches to the north-west was a chain of rich copper-bearing hills, stretching for 200 miles in length and 10 miles in width, and now known to be the greatest copper deposit of the world; a copper Rand, which has already produced 140,000 tons of copper, is turning out 40,000 tons a year, and will produce later 100,000 tons annually.

I knew in that journey, though, that the story of red rubber and the Belgian atrocities was greatly exaggerated, if not entirely untrue, for I never met or heard of any of these things. It is probable that there was a close relation between the discovery of the wealth of Katanga and the story of the Belgian atrocities; for the Kaiser in his desire for the one, had invented the other, and found degenerates and traitors of the type of Roger Casement to carry out the unclean intrigue to estrange Belgium from England. The Kaiser imagined that possibly with the help of a very small but anti-patriotic section of the British people, he might win his way to the wealthy heritage of the Congo. But this crafty scheme was to be defeated by the good sense of the Belgian people and the wisdom of their King Leopold, who always suspected the German Kaiser.

England retained Belgium's friendship, in spite of the abuse of this gallant nation by the unpatriotic section of our press.

King Leopold helped Williams in the construction of the Lobito-Katanga Railway, commenced in 1903, and later to carry the Cape to Cairo Railway from Broken Hill to the Congo frontier, and through that State towards its goal of Cairo.

How Williams defeated the Hohenzollern's aims and ambitions in Angola, which had been fostered by our agreement in 1898 to allow them a free hand, is a good story of its own; for, guarding his secret, and within a week of leaving London, Williams had obtained a concession from the Portuguese Government at Lisbon to build the line from Lobito towards Katanga. This concession forestalled the Germans, to the wrath of the scheming Kaiser, who on finding himself baffled, nearly dismissed his Minister for allowing such a check to Germany's ambitions to be brought about under his very nose.

In 1907, when I was at Broken Hill in the Belgian Congo, there was only one outlet for the immense wealth of Katanga, that to the south and east, by Bulawayo to Cape Town or Beira. To-day, this Central African line, the future backbone of the African railway system, can take one by rail or river through Stanleyville to the sea at Boma, and will soon take one north from Stanleyville to the Nile near Lake Albert, and thence by this river and its railways to the Mediterranean Sea.

Of the feeder lines of this central line of communication, the railway from Katanga to Lobito will, when completed, be the most important of all, commercially and strategically. Commercially, because it will bring thousands of tons of ore, copper, gold, and platinum, hundreds of miles nearer Europe; will bring the high plateaux of the great Zambezi-Congo divide, with its vast possibilities of cattle ranching, stock raising, and cereal cultivation, into close touch with the meat needs of Europe; and will take the settler from the sea to the Bihé highlands, a second Argentine, and beyond them to another land, Katanga, richer than Brazil. Strategically, because it forms a short cut, not only to war needs in copper, but provides another route to India and Egypt, should the Mediterranean be closed to Britain.

In October 1920, the rail-head was still at Chinguar, where it had arrived in 1914; but Paulings, the great African railway contractors who have done so much for Africa, and incidentally for Great Britain, are pushing forward, with their usual energy, the work of railway construction eastwards to Katanga.

I left Chinguar on the morning of the 1st, and after a comfortable journey with two breaks for food at Huambo and Cuma, and a sleep in the carriage at Ganda, where the train halted for the night, arrived at Lobito Bay on the afternoon of the second day.

I have taken you across the 300 miles on a "flying carpet" because I want to bring you back on this railway by the way you will follow it yourself if you go to Angola.

When approaching Lobito Bay from the sea, one cannot at first see the harbour; there looms ahead a line of barren cliffs and what appears to be a sandy beach below them. It is not till the ship is close to the cliffs, that what appeared a sandy beach is found to be a long, narrow sand-spit, 3 miles long, a mile or more from the shore and parallel to it; while between the cliff-girt coast and this narrow sand-strip lies one of the finest harbours in the world. There is little tide, and a great fleet could anchor in these waters—so still in all winds, that it might be a mountain and not a flat ribbon of sand only 300 to 400 yards wide which protects it.

On the narrow sand-spit will one day be a great commercial port, on the hills above it a residential city, and in the water of the bay will lie great ships come with merchandise, to go with the cattle and the food grown on the Angolan highlands, for the workers of Europe. If one climbs the hills on the mainland, the harbour lies at one's feet. Seawards is the yellow ribbon of sand, month by month changing its look, as new houses, gardens, and yards rise up in the growing city. At the wooden pier, jutting out from the spit, two small steamers are loading, while another waits its turn in the bay.

Where the spit springs from the land is a lagoon, once a mangrove swamp, which looks from this height like a grass-covered valley; it is nothing more than an African swamp, ugly to-day but useful to-morrow, for the dock and wharf space it will give. Contrasting vividly with the green of the swamps is the yellow of the limestone hills which fringe the coast, stretching away to the north and south and east as far as one can see. Between these hills and the shore, and looking very small from this height, shimmer the steel rails of the railway which, starting at Lobito, runs past Benguella, and then ever eastwards to climb over these hills on to the great bracing plains of the east, and then across them to such mines as King Solomon never dreamt of, the greater land of Ophir—Katanga.

Life on the open, breezy, and mosquito-free sand-spit at Lobito is more pleasant and healthy than in the neighbouring towns of Benguella and Catumbella, but this advantage will be abolished if the building speculator overcrowds the site. There are already banks, shops, a Governor's house, British Consulate, and the railway terminus with its offices and workshops.

The railway is staffed by both Portuguese and British; the Machados, father and son, who were in control of the management, working with the same zeal as the British officials, Messrs. Varian, Clark, and Johnston, who are technical experts. To all of these, Mr. Duthie the Vice-Consul, Mr. Russell, Mr. Petersen, and especially Mr. Tudor Pole, the constructor of wireless stations, I am indebted for much kindness and help.

I do not know if the network of twenty wireless stations in Angola will do all that my friend Pole, an enthusiast on the subject, claims; but if it will render Angolan telegrams quicker than a train or the post, or even a native runner, it will have achieved something. Perhaps there is gall in the ink as I write, but you will read a little later how even the august orders of the Governor may be as naught to a telegraph clerk, and a helpless traveller may struggle through discomfort to failure in the grip of a one-man-telegraph strike.

Lobito has an excellent water supply, piped from the Catumbella River, 8 miles to the south. Everywhere there is electric power and light, derived from turbine plant in the same stream.

The steamship lines which call at Lobito include cargo boats of the Elder-Dempster and other lines from Liverpool, and an occasional Union Castle ship from Southampton. Two Portuguese lines, the Government "*Transports*" *Maritimus* and the subsidized *Empreza Nacional*, are supposed each to send a ship a month to the Angolan ports, including Lobito. An American service is helping their great oil interests in Angola, and Italian ships are talked of.

But, reader, beware!! Listen to one who has suffered grievously. Take an English ship direct to Lobito if you possibly can, and if you cannot find one, book your passage on the Portuguese lines, weeks ahead.

When one has come down from the hills above the harbour and looks at them from the sea, they appear as a line of bare limestone ridge and terrace, mounting ever eastwards to the plateaux and highlands of Central Angola. These hills are pierced by the valleys of many a mountain river, and if engineering alone had dictated the route of the Benguella Railway it might have been running to-day from Lobito by the Catumbella valley to the plateau, but local and political influences determined that the line should go first along the coast to Benguella, to begin its climb through the mountains up the steep little valley of the Lengue River, a tributary of the Cavaco.

For the first 15 to 20 miles the railway runs along a sandy seashore, past the Catumbella River valley and the old-world town founded three centuries ago, where Cameron in 1864 found his way to the sea, weary and foot-sore, after crossing the African continent. It passes through Benguella town, once the greatest slave and ivory market of this coast, yet the capital of the district, lying stretched along its open, useless bay, a great collection of old-world balconied houses in high-walled slave compounds, separated by wide, shaded avenues.

Benguella lies dormant, but jealous; as a woman who sees a younger rival growing to fame and power by her side. She cannot compete with Lobito; Nature itself forbids it. The harbour is worthless, the deadly mosquito is here, and the fever it brings; but the town has several thousand inhabitants, of whom some 3000 are whites, and the Governor's palace and such society as the district boasts are still at Benguella. The line passes through the Benguella plantations, and is moving now due east over the foot-hills to the valley of the Lengue.

At San Pedro, where the older rocks, mostly gneiss, begin to appear among the lime, sandstone, and marl formations, the ascent is so steep that the rails give place to rack and pinion for a couple of miles. This section of the line, passing as it does through a wild gorge, is picturesque and was correspondingly difficult to construct; for, climbing ever upwards, it must pass and repass chasm and river-bed to emerge from the Lengue valley and enter farther into the waterless belt.

In this thirsty country every drop of water required in the construction of the line and for the workers had to be carried to the work, and a party of lions which hunted near San Pedro, drank at Bimbas, 10 miles away. Rain falls here but rarely; the scanty low scrub and the occasional euphorbia, acacias, and baobabs are covered with dust, which colours everything in monotones of yellow and grey.

The first rapid ascent from 300 feet at San Pedro to over 1000 feet, 6 miles beyond it, has brought the line to a rough terrace strewn with granite domes and tors, but it is still ascending, if more slowly. At the Coretava River, which it crosses and recrosses nine times, the line has reached an elevation of 2000 feet. In a series of picturesque loops and curves, the railway passes over the divide between this river and the Catengue, and runs down a slope through scenery which is passing from dreary scrub to open forest, till water itself is reached where the Catengue River flows by the post and station of that name.

Bird life, which has been absent in the scrub, begins again; and the kudu, roan, duiker, oribi, and other antelope are able to support life on the scanty grass which grows by the Catengue River; in this country too, I heard both lion and leopard roar at night, and came across their spoor.

Catengue is a restaurant station on the line, and the crossing-place of the old road from Benguella to Quillenges and Lubango in the south.

From the Catengue valley the ascent to the higher plateaux begins again, past the valleys and divides of this river and its neighbours, the Caimbango and Cubal. The landscape has been steadily changing, the area of scanty vegetation is giving place to a grass and open forest-covered country, where there is always some water even in the dry season, and in the rains many rushing streams.

At Cubal, 200 kilometres from the sea, is an experimental cotton plantation. Of the varieties grown, Caravonica, Egyptian, Upland, and Peruvian, the first-named has done the best—yielding 400 lb. per acre in the first year, the plants averaging 200 balls, and standing over 6 feet high.

Though cotton has been grown on the lowlands of Angola for many years, this was the first attempt made to cultivate it in the plateaux at 3000 feet. Rubber and wheat have also done well on this plantation. The soil of the region is, according to an agricultural expert, "composed of decomposed granite with its large potash content; the surface contains a fair amount of humus, the subsoil is of a porous gravelly nature, and there-fore naturally drained, and the soil throughout appears friable and easily worked."

Beyond Cubal station, where the line ascends gradually along the valley of the Ganda, a tributary of the Cubal, the heavier rainfall, more temperate climate, and increasing elevation are altering the features of the country. The last baobab and euphorbia have been passed, and an open forest and grass-covered land reached, which would be suitable for stock-raising if the tsetse fly, that carrier of dreaded Nagana cattle disease, was not so close by in the Cubal and Catumbella valleys. The fly must be stamped out before this part of the country can be used for stock-raising.

At Ganda, where the train halts for the night, passengers may sleep in the train or in a good hotel near the station.

Beyond Caconda station, which is reached at 250 kilometres, the line again crosses the valley of the Catumbella River at 275 kilometres to reach, 40 kilometres farther on, Cuma, a growing town 4700 feet above the sea.

To the north of Cuma is an open country, fertile, fly-free, and not unlike the Transvaal high veldt; where Mission stations, Boers, and the Zambezia Exploring Company have large farms.

The 125,000-acre farm on the Cuito stream, belonging to the Zambezia Company, has proved remarkably successful this year (1920), the wheat averaging nearly 30 bushels per acre, while other crops have given equally good results; the cattle of the farm, which depend on grazing alone, are fat and free from disease.

From Cuma the line steadily ascends till it reaches Elepi Town, where the height of the plateau is 5300 feet, and there are a number of farms. The country consists of grass-covered hills, with occasional bush forest in the more sheltered valleys, and is eminently suitable for Europeans and stock-raising; though the soil, through the repeated burning of the grass, is not as rich as it would otherwise be.

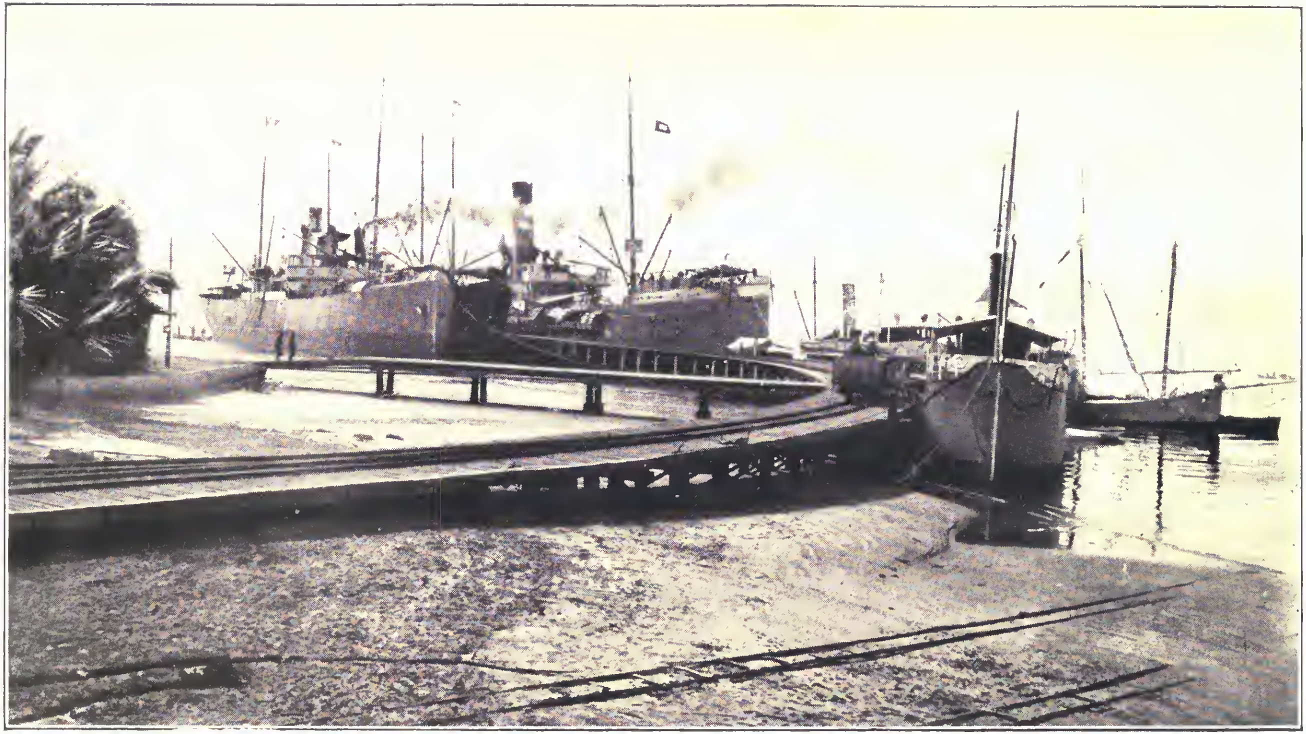
Beyond Elepi the railway climbs the Chicanda gorge to reach at its crest an elevation of over 6000 feet, the highest point of the plateau; from where it descends to cross the valley and reach the thriving town of Huambo, the centre of a prosperous farming country.

Here and there along the railway occur granite hills of extraordinary shape, with columnar and dome-shaped granite peaks, hundreds of feet high and bare of all vegetation, looking as if some giant hands had carved and placed them there.

From Huambo to Chinguar, the terminus of the line in 1920, the railway crosses an open and comparatively flat divide, the source of many mighty rivers like the Cuvo and the tributaries of the Coanza and Cunene, which, rising within a few miles of each other, flow to the Atlantic hundreds of miles apart; while in the same region are the sources of the Cubango and its tributaries, which actually join the Zambezi and pour their waters into the Pacific Ocean on the other coast of Africa.

This railway is prospering; last year (1919) over 50,000 tons of produce, mainly maize and maize flour (40,000 tons), sugar (50,000 tons), potatoes and onions (2600 tons), and wax (1800 tons) were carried over it from Chinguar to Benguella or Lobito. During the same period 50,000 first- and second-class and 150,000 third-class passengers were conveyed by train.

The construction of the line beyond Chinguar should present few difficulties, as from this point to the Belgian frontier, and beyond it to Katanga, it will follow the great Congo-Zambezi divide, a plateau gradually falling in elevation. Two or three rivers, the Coanza among them, will require to be bridged; but I understand that none of the engineering difficulties ahead are comparable with those already overcome, and construction should be rapid. As the country towards Katanga is increasingly populated and fertile, the line should pay its way, even before the great mine belt of Katanga is reached, where the present annual output of 40,000 tons of copper should yield in normal years £500,000 in freight fees alone.



THE BUSY PIER AT LOBITO BAY

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CATUMBELLA RIVER

[*See page* 123

CHAPTER X

A Lion Adventure and a Chameleon Story

LIONS were once numerous in Angola, but the commercial type of game-shot, the merchant of skins, usually a Boer, has slaughtered so much of the game that the lions have died out for lack of nourishment, or have retired farther and farther from the haunts of men. In three months of hunting I had seen tracks of but three lions, and there seemed little chance of any success at my favourite sport of lion hunting. Yet there was a family of lions within 10 miles of Benguella, and this chapter gives the story of the death of one of them at the hands of a plucky Portuguese novice.

Mr. William Maehado, the man who shot the lion, was acting as director of the railway in the absence of his father, and on my journey to the south of Angola he took me with him, along the railway line from Lobito to my starting-point, Catengue. But we did not reach Catengue that day, for at Benguella, our first stop, we heard such good news of lion at Bimbas, that we decided to go there instead.

We motored from Benguella to Bimbas, along the open valley of the Cavaeo River, and sometimes over its dry and sandy bed, under which the water flowed, as happens with most of these southern Angolan rivers that pass through desert country. The road stopped at the pump station of Bimbas, and here Machado left me to return to Benguella.

Beyond Bimbas the valley became a gorge where the Cavaco emerged from the hills. Through these hills, the first of those terraced ranges which end at last in the great Angolan plateau, winds the railway; by the river valleys where it can, or over the hills on its way through the plateau to Katanga. Leaving the open Cavaco valley for a space, it climbs over the hills, past the station of San Pedro, again to meet the Cavaco River, near Catengue, 40 miles away.

At the head of the open valley was the pump station of Bimbas: at the mouth of the gorge two miles beyond it, were two lagoons and two small villages; and somewhere in the valley of the Cavaco River, hidden in rocky cave or in the long grass by the lagoons, was this family of lions. Round one village and the water-hole of the Cavaco River near by it, were many of their tracks. Three or four nights before our arrival, the lions had killed five goats in this village, and the night after had growled so fiercely round the little huts that the villagers had fled, and the village was now deserted.

There were two possible ways of trying to kill these lions. One was to track them up by day to their lair in the hills; the other to wait for them down by the village when they came to hunt for food and water at night. After following their tracks far up the Cavaco, and questioning every native met, I came to the conclusion that one could never find them by tracking alone, for they appeared to make a long nightly round, up the Cavaco valley, then across to the railway line, down this line, and back again to Bimbas. During the daytime the lions could lie up anywhere in this 20 miles circuit, in a country unknown to me, and where no local native would now venture. To get a shot at them by night meant sitting up in some kind of platform, and over some animal for bait. There was a suitable tree near the bed of the river, where lion tracks were plentiful, but no inducement could obtain any bait. I talked persuasively to the villagers, promising a good reward, pointed out how dangerous these lions might become if let alone—all to no purpose, for neither cow nor goat was to be had.

It were better to have stayed on and tried persuasion for another day or so, or have brought back bait from Benguella, than have left the valley and the lions; but twenty carriers were supposed to be awaiting me at Catengue, brought all the way there from Quillenges in the south, by a special order of the Governor, and carriers were so scarce that to miss them was to miss my journey to South Angola.

If the lions were not for me I knew they should be shot, and writing to Machado, advised him to get a suitable rifle and watch for them in the river-bed, with an ox as bait.

Machado procured a big game rifle, and was preparing the rest of the scheme for watching, when he met and bagged one of the lions in a much more dramatic way. During a trip by trolley, accompanied by Mr. Clark, Machado met two lions. It was evening, the sun had set and darkness was coming on, when Clark saw an animal running over the line, which he at last recognized to be a lioness. She crossed the line. Soon after, on the other side of the line, Machado and Clark saw a maned lion.

Arguing very wisely that the lion would probably cross the line and join his mate, Machado, who had the rifle, kept a sharp look out, helped by Clark, who had only a shot-gun. They lighted the trolley lamps, and motored on slowly. A few yards farther on they came across the big lion, standing on the line and blinking at the powerful lights of the trolley. Machado fired at the lion, which rolled over the railway embankment, below which he lay groaning for a moment, then picked himself up, and moved off into some low, scattered bushes that grew near the line.

Up to this point Machado and Clark had acted like old lion hunters, though this was the first lion they had ever seen. From now onwards they did things which, though wonderfully plucky, no experienced lion hunter would ever think of doing. They followed up a wounded lion in the darkness, and gave to a native to carry the lamp which they hoped would both light up the lion's hiding-place, and frighten him as well. They thought the bush was so open that the lion could not hide in it, and would be easily seen with the powerful trolley lamp. Thirty or forty yards from the railway line, the procession of the intrepid Portuguese and Scot and the unwilling native lantern carrier, who had got thus far in safety, heard a terrific roar. The native swung round to bolt, knocking over Clark by a blow on the head with the lantern as he did so, and Clark lay stunned. The one remaining effective, Machado, fired into the noise, and taking Clark with him beat an orderly retreat to the trolley, when, wise at last, and gathering speed, they motored into Benguella.

It occasionally happens that a wounded lion does not charge after his warning roar, when followed in the daytime. This should happen even less often at night, when he is always more truculent.

My two friends had just had a very lucky escape, and should have learned a lesson; but just listen to what they did next day.

With two or three other Portuguese gentlemen, including a photographer and a large party of unarmed natives, a search was made for the lion as soon as the party could reach the scene of the last night's adventure. A long line was apparently formed at the point where the wounded lion had rolled off the railway track the night before, and the blood trail and spoor were followed up. Only 100 yards or so from the railway, the photographer spotted the lion's head, looking out of a bush, and appealing to the "audience" not to spoil a good chance of a dramatic photograph, quietly walked towards the lion.

The lion, possibly from astonishment, and more probably because, happily for the photographer, he was nearly dead, allowed the man to approach within a few yards of him. Then he roared, and charged. The photographer fled, followed by the lion; both fell, exhausted and close to each other. Then Machado fired again, and killed the lion.

When the body was examined, it was found that the first bullet, fired the night before from a large calibre Mauser rifle, had traversed the abdomen, making a large exit wound, through which a portion of gut protruded; vital internal organs, probably including the liver, had also been injured. I believe the extraordinary luck which protected this party of plucky novices was largely the result of a wound causing shock to that bunch of abdominal nerves, the splanchnics, which are both the aim and undoing of so many boxers. The lion had got a knock-out blow the first night, and this and the glare of the lamp stopped him charging then, while his great weakness, due to loss of blood, saved the photographer the day after.

A curious source of consolation to me, in the trying days at Bimbas, where I was struggling to persuade frightened and drunken villagers to help me procure bait or spoor the lions, was my chameleon "Jimmy."

This was the second chameleon I had adopted during my wanderings in Angola. The first was found near the River Longoé; this one, near the Upper Coanza River, opposite Chuso village.

Jimmy the First I met while being carried along in a "tipoia" or hammock, a prey to fever. He was sitting on the branch of a bush when captured, and protested violently at his removal. A box was made, and James installed therein was fed on flies, which he took suspiciously and resentfully. This chameleon was with me a fortnight, and during this time he became a little tamer, but could never be induced to capture flies while sitting on my hand or hat; and he never got out of the habit of swearing at me in the quaint way chameleons have. He was lost in a camp on the Lucé River; probably one of the servants who had been punished let him go, in revenge, and left me lonely and lamenting till Jimmy the Second was found, a week or so later.

My carriers, seeing how much the first chameleon had been missed, brought me the second, which they found on a tree. Jimmy Secundus was smaller than the other, and though he swore away at first, got tame very quickly, learnt to hunt flies from my hand or hat, sit up and beg, wear a little set of harness, and in fact behave as all good little chameleons should. I gained a good deal of prestige by wearing Jimmy as a sort of button-hole and hat decoration, for the natives consider chameleons to be actively poisonous, and to have a poisonous skin, and seeing that Jimmy did not do me any harm, they began to think that I must be possessed of a big fetish. The Portuguese, who called me "the man with the chameleon," shared this belief about the poisonous nature of the skin, which they supposed was employed by the natives to poison each other, and sometimes Europeans.

When on the way down to Lobito Bay from Chinguar, the railway carriage was besieged by people waiting to see Jimmy perform his fly-catching tricks, and there were many "ohs" and "ahs" from both natives and Portuguese, when James would whip out his 8-inch tongue and pouch a fly at this distance from him.

Although Jim was not unhappy, and certainly well fed and looked after, yet he had a constant desire to escape, and became thoroughly artful in these attempts. He used to watch me, and if he thought me asleep would creep out of his box, or try to slip his little arms out of the harness of soft grey wool which confined him. Even if one had wished to, it would have been unkind to give Jim his liberty once we had moved from the Coanza River, as the whole character of the vegetation in the coastal region and south of Angola, where Jim had now arrived, was different from that in the north, and it is doubtful if he could have looked after himself, or survived long in this strange country.

Although Jimmy may have had weary moments in captivity, he must have been happier than the chameleon of the Dutch naturalist, Bruin, who describes the animal as living on air, though he admitted the chameleon appeared more animated on the rare occasions when he was freed from his box, and was seen actually to eat flies; or from the chameleon of Bosman, the eighteenth-century traveller, who, while agreeing with Bruin as to the ability of his pet to live on air, denied its fly-eating habits. Both at Lobito and Mossamedes, Jim found so many flies that he grew tired of the diet and refused to eat any more, and had to be taken out for walks, where he could find other sorts of game, including spiders and various kinds of small flies, amongst them a little black-and-yellow striped one, which Jimmy used actually to catch while it was hovering in the air. For a long time Jimmy's need for water had not been realized, but my attention was drawn to it by his habit of nibbling at any shiny substance he saw; he took water readily when offered it, especially in the hotter weather, and preferably in the form of dewdrops.

Later on, when Mossamedes, the end of my journey, was reached, Jim was left in the kind hands of Mrs. Allen, the only English lady there, and when saying good-bye to the little beast, I felt an old friend had been lost, and a happy chapter of comradeship in life's voyage was over.

When we left Bimbas, it was to resume the journey to Catengue, which had been interrupted by the search for lions. Collecting half a dozen Mondombe carriers with difficulty, we marched from Bimbas to the nearest railway station (San Pedro), 5 or 6 miles away, and caught the daily passenger train which ran from Lobito Bay to Chinguar.

I found on arrival at Catengue that the carriers which the Governor of Benguella had promised to send me from Quillenges had not arrived—so stayed to collect others.

In my little room in the railway hotel, sleep was impossible through the barking of dogs when the window was open, and the stifling heat and want of air when it was closed.

As midnight found me still awake, my camp bed was carried to the verandah of the railway station, where I slept peacefully till morning, notwithstanding the pleasant remarks of the hotel proprietor's son that the Catengue lions would probably partake of an English supper.

I left this inhospitable inn at daybreak next day to find another, where I met as much kindness as I had experienced discourtesy at the first. In my long journey through Angola this was the only occasion when I had met with rudeness and hostility to myself and my country, for, among other unpleasant remarks, this hotel proprietor, who was also Administrator, accused me of being a spy. He said he knew *all* about spies, as he had seen the Germans come to Angola, and, like me, travel round the country with a big camera. It was not difficult to deal with the hotelkeeper; the difficulty was to keep one's temper with the Administrator of Catengue, the post he held for the Portuguese Government; but I kept it notwithstanding.

The carriers allotted to me by this gentleman were Mondombes of the Benguella province, who wore skins dyed red with tacula, anointed their bodies with oil, and were even less cleanly than the other tribes met on the journey. The men, great hunters and wanderers, are a pastoral people, keeping large herds of cattle. The women arrange their hair in ringlets plaited with beads, and wear heavy bead collars round their necks. In this tribe, and especially in the southern part of the country, there exists the curious custom of daubing clay or ashes over prospective brides, who are then given great freedom and allowed to wander about and visit their friends.

A curious Mondombe custom is the planting of a banana tree at the time of marriage. If no child is born in the year which it takes for the plant to bear fruit, the husband may dissolve the marriage.

CHAPTER XI

SOUTH AGAIN—CATENGUE TO LUBANGO, AND A BUFFALO STORY

OUR small party of nine people (two house-boys and six porters) left Catengue before daybreak on the morning of the 11th October.

The road lay first south-east for 100 miles to Quillenges, and then a similar distance south-west to Lubango, along the lower slopes of the Angolan plateau. These uplands, some 2000 feet high, rose eastward to highlands of twice this height, and dropped westward by terraces through an increasingly arid country to a desert plain and then the sea, 100 miles away. The country was covered with grass, light bush, and open forests of small trees, except along the rivers with their fringes of denser growth.

The Angolan winter was coming to an end. In the uplands and interior the rains had already commenced, but here the country still looked parched and dry, for the rainfall is smaller than in the north, and often capricious; but clouds were gathering, and the air was oppressive with hints of approaching storms. The early mornings were still cold, but in the day the heat and dust of the roads were becoming a discomfort. Though I had reduced all equipment to bare necessity, and carried a couple of rifles and heavy haversack to lighten the other loads, it was with difficulty we reached even the first water at Gondombes, a cattle ranch 6 miles from Catengue. The Mondombe carriers were lazy and unwilling, and no encouragement or promises of beer could make them march cheerfully, or prevent one from deserting and leaving us to divide and carry on his load.

Though the ranch was near a stream, this, like all others in this coastward country, is dry for most months of the year, and water for irrigation and stock was drawn by hand pulley and bucket from a well. It was a well-equipped farm with likely stock, raised by crossing Angolan cows and European bulls; the nearest market was Benguella, where the stock was sent alive or as meat and hides.

Though convinced of a bright future for Angola, from its climate and geographical position, little had been seen to convince me of any hope of immediate prosperity; pegging of claims, wild speculation in land, and indiscriminate cutting of timber for rapid profit, were painfully evident everywhere; but sober development, such as that at Gondombes, seemed to be the exception.

Senhor Duarthe, the manager of the farm, not only gave me excellent information about the game of the River Coporollo, a day's march to the south, but arranged for his friend Senhor Mendez, who was driving past there on his way to Quillenges, to give me a lift and help me with carriers; as my own, through another desertion, had been reduced to four. Mendez proved a most cheerful companion, who drove an obstinate mule over a terrible road with grim determination. Our two-wheeled "Cape cart" swayed and rolled over great boulders and into deep ruts, while Mendez pulled and whacked at the mule, and I held on to my precious guns and camera, and almost equally precious bottles of Mendez' Chicago beer. Though we escaped a smash, we suffered many bruises, and were two very weary people who arrived at the Coporollo River. In the 20 miles between Gondombes and the Coporollo, there is no water for most seasons in the year, and though my carriers had been reinforced and their loads lightened, it was doubtful if they could reach me at the river that night.

Mendez only consented to leave me when persuaded that an old hunter was quite safe though alone. Soon after leaving the Coporollo he ran into a herd of elephants, which crossed the road a few yards in front of him. He told me afterwards that the elephants appeared to ignore him, but that both he and the mule were deeply impressed at the sight of this line of great grey bodies, ghost-like in the silence of their passing.

Though left with a Portuguese bun and a bottle of the famous beer, I went off to the jungle to hunt for something more substantial for dinner, and to look for some shelter for the night. It was fortunate that the carriers turned up at last, for my hunting failed, and a hungry stomach and a bed on the banks of the Coporollo would have been a poor substitute for my good dinner and camp-bed that night.

The Coporollo, like most Angolan rivers of the arid coastal belt, runs a subterranean course before it enters the sea. In this, the dry season, it was just a trickling stream a few feet wide, and only inches deep, while a few miles seaward it disappeared into the sand, as most of its tributaries had already done. In the rains, a yellow flood pours down these rivers and over their banks ; it comes like a wall of water, but in a brief period the smaller river-beds are dry again.

Camp was pitched near a mighty tree, which had thrown down so many aerial roots from its branches as to cover a great space, giving deep shade and a wonderful coolness, even in the hottest time of the day. The aerial roots rose up from the ground like the pillars of a great cathedral, supporting, as it were, the lofty dome of branch and leaf overhead. There are not many such trees left on the Coporollo now, and will be fewer in the coming years ; for, with timber fetching 120 escudos a cubic metre at the ports, the speculator is merciless to the forest trees, and the giants of the river are falling fast. The continual destruction of the forests threatens that of the many beautiful animals they harbour, and even the rainfall and prosperity of the province ; for there is no Forest Department here to stay the speculator's hand, or plant new trees.

There are still a few elephant, buffalo, eland, roan, water buck, pallah, kudu, reed buck, bush buck, red and blue duiker, and two kinds of pig, harbouring near the bank of the river, for I found the spoor of all these animals; but they are so disturbed by tree cutting and indiscriminate shooting that before long this country will be gameless.

A week's hunting in the country round the Coporollo failed to give me a single photograph, and a few buffalo, kudu, bush buck, and duiker were the only game seen. The kudu appeared to be of the normal type, though it is said that they differ from those of the coast and other parts of Africa, in having a darker colour and no mane.

While waiting on the Coporollo for the Governor's carriers, several European prospectors passed near us along the Catengue and Quillenges road.

One party included Mr. Johnston, an experienced hunter, who had just seen a herd of some 200 elephants cross a river a few miles to the south; accompanying him were a Mr. Bull and Mr. Drummond, who had come for their first shoot, but had seen only a few zebra, kudu, and roan.

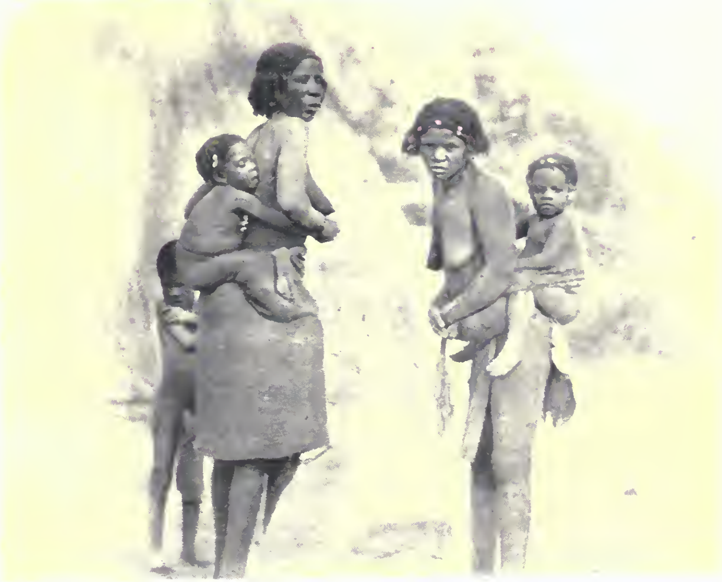
Another party consisted of two Portuguese gentlemen, Senhors Cunhia and Tuscano, who had hoped for a little hunting with their pegging of timber land, but had seen no game at all.

I was very anxious to get young Tuscano a buffalo, and with the help of a native hunter, called Muganja, we spoored a herd of about a dozen of these animals for several hours, coming up close to them at midday, when they were

THE BED OF THE COPOROLLO RIVER, WITH BUSH AND TWO BAOBAB TREES [*See page* 144

A WELL-BUILT VILLAGE

A STOCKADED VILLAGE



HOW BABIES ARE CARRIED IN ANGOLA

lying down in thick bush. The buffalo had circled before lying down, a habit these animals acquire when much hunted. We had unwittingly followed this circling spoor, which inevitably must give the animals the hunters' scent, if any wind at all is blowing. The inevitable happened, and in a moment there was pandemonium as the alarmed animals crashed through the bush all round us, without, however, giving us a chance of a shot.

An attack of fever on this particular day left me in no condition to control the tracker, who should have stopped following the buffalo immediately they circled, and waited to listen for their bovine noises before making the final approach.

Tuscano was both keen and quite cool when the buffalo rushed through the bushes all round us, though at such close quarters an irritable bull (and one of them had a broken leg) or a mother cow will sometimes charge. Though Latins do not usually make such good hunters as Anglo-Saxons, owing to their lack of patience in hunting, they are just as brave, and while they still retain their interest, as enthusiastic. We followed up the buffalo for some time, but never met them again; and prostrated by fever and weakness, it was only with Tuscano's help that I reached camp.

Very different was my experience two days later, both in steadiness in face of danger and kindliness in distress, with T——, a hunter of Dutch and Irish descent, who had camped with his wagon on the Coporollo. He was carrying stores in his ox wagon, a favourite occupation of the Boer settlers in Angola, which enables them to shoot along the roads, making a good deal of money above that obtained from transport work, by selling the skins and meat of the animals they kill.

Just north of the river, on the day Tuscano and I were hunting south of it, T—— came across a solitary bull buffalo, which he succeeded in killing with the help of two hunting dogs, after the buffalo had charged him more than once. He told me that his dogs were trained to tackle buffalo, and could hold them long enough to allow of several shots being fired or photographs taken. The dogs had apparently hung on to the buffalo's nose and ears, and so worried him that the hunter had been able to finish the buffalo without much danger to himself.

I will let the reader judge of the value of both the hunter and his hounds from the account written in my diary on my return to camp, after a day with both.

"16*th October*.—Went out at daybreak this morning with T——, who tells me that he has shot a large number of buffalo, and has great experience of hunting these animals, but knows of no better way than by following them with dogs, which hold them, and then allow of an easy approach. Although the method did not appeal to me, it was agreed that while the dogs held the buffaloes and I took photos, T—— would protect me with his rifle. When the photographing was over, we would kill a buffalo or two for T——, who was in need of the value of their skins.

" We came across fresh buffalo tracks an hour after leaving camp, and in another hour came up to some eight or nine animals lying down in a little clearing in the bush, looking like the big black boulders of which this country is full ; and it was only when examined with glasses that the boulders were proved to be buffalo.

" I was very keen on creeping up to the herd and taking photographs at once, and had started preparing my camera, when T—— begged me to let the dogs 'hold the herd,' as he feared they might get our wind and bolt. I agreed very reluctantly, as the chance of getting buffalo in open bush, and asleep, appeared ideal for a stalk with a camera.

" T—— let loose the hounds when the 'Reflex' camera had been strapped to my body, and extended out ready for instant action. When the dogs reached them the buffalo jumped up, but instead of standing at bay, bolted, the bulk of them running away from us. Three of them, two cows and a big calf, galloped towards us with the dogs after them. I began to focus on the leading buffalo, a big cow, which was difficult to photograph, as she came fast towards me, necessitating constant change of focus. Her image in the mirror of the 'Reflex' camera was getting bigger and bigger, as I struggled to adjust the focusing screw, and extend the bellows to keep the focus.

" The photo was never taken, for I heard a shout of 'Run, Colonel, run!' and taking my head quickly from the hood of the focusing screen, saw T—— 30 yards away, running hard, with both our rifles. There was little time to spare, the buffalo were almost on top of me, and it was hard to run with a 3-foot camera projecting from my body. It is wonderful how rapidly one can move when three big bounding bodies with three great pairs of horns are galloping on you, and I got out of their way just in time, with no further mishap than torn clothes, scratched skin, and a somewhat damaged camera. Old Muganja, the tracker, pluckily ran towards the buffalo and myself with the spare rifle, and when he saw I could not use it, strapped up as I was with the camera, tried to fire it himself; but as he had never seen a hammerless rifle, did not succeed, as it was on 'safe.'

"We never saw any of this herd again, and only got the dogs back an hour later, when they returned with tongues hanging out, and looking very done.

"When asked why he ran away, T—— murmured something about his belief that the buffalo were going to be held up by the dogs every minute, and as he did not want the buffalo to see him, he kept out of the way. He said nothing about leaving me in the lurch, but from an expression that he let fall later, to the effect that 'people who were too plucky with buffalo never lived long,' I surmised that he had greater affection for this world than for an uncertain future one: and he had no remarks to make when told that, as far as buffalo went, he appeared not to be in any danger of a move.

"We struck the spoor of another small herd a little later, and after stating very emphatically that the dogs should NOT be loosed if we came across them, I decided to accompany T—— again. On this occasion he fired at a buffalo cow a few feet away from me, while I was trying to photograph her. I never expected the shot, and could not possibly have got away this time, if the buffalo, which T—— says he hit, had charged—a quite likely thing for the cow to have done, if wounded, as she was facing me, and so close. The herd and the cow bolted away from us at the shot, and after this I left the camera alone, and followed up with the rifle till sure that there was no blood spoor, or wounded animal to be dealt with. How T—— could have missed the buffalo at 5 yards is hard to say, but my trust had been so shaken that when he wanted to borrow my rifle I refused and went back to camp.

"I have been singularly foolish to-day, and singularly lucky."

On the evening of the buffalo adventure, camp was struck, and we marched south, parallel to a river called the Chingaloi, and on our way to Quillenges and Lubango. That night we halted at the abandoned farm of a Sierra Leone boy, a British subject, who had failed to make the farm pay. The village and surrounding region are called "Quinjamberect," from the name of a forest tree which abounds here. The country is hilly, covered with scant grass and open forest. The game, while similar in variety, is even scarcer here than on the Coporollo.

After hunting unsuccessfully towards the source of the Chingaloi, which rises in some hills to the east, we continued our march south again, reaching the Mujambo River late at night. Here I found my friends Cunhia and Tuscano encamped near the junction of the Mujambo with its parent stream, the Hanja, which itself flows into the Coporollo. Both river-beds near our camp were dry, though clear water could be found just below the sand, and the beds of the river were full of water-holes dug by men and beasts.

Tracks showed the presence of a large number of elephant, mainly females and young, but all my attempts on two days to photograph them failed, for the few natives who knew the country were afraid of them, and refused to carry rifle or camera anywhere near a herd, which cannot be done by a white man alone, tracking at the same time. The difficulty and danger were increased by the fact that these elephants were protected, heavy penalties being enforced if one was shot, and it was difficult to photograph without running the risk of being charged, and having to shoot in self-defence.

After trying for a time to carry both camera and rifle, I had to give up all idea of photography, and continue the march south from the Mujambo River for Quillenges. We marched late in the evenings, and before daylight in the mornings, to avoid the heat, and rested under trees at midday.

One such halt was made at a river here called the Catambue, but which is simply the upper course of the Hanja. The custom of giving the one river many names adds further to the difficulties of the wretched African traveller, already troubled with inaccurate maps and unreliable native information. On the Catambue I found the tracks of roan, eland, and kudu, and saw a couple of klipspringer jumping from rock to rock of a steep hillside.

On the sixth day of marching, and nearly 100 miles from Catengue, we reached Quillenges, to find Senhor Mendez and receive his welcome hospitality for the five days of our stay.

From Catengue all the way to Quillenges, I had hoped against hope, and waited against time, for the twenty carriers whom the Governor of Benguella had telegraphed to the Administrator of Quillenges to send up to me at Catengue. The possibility of missing these carriers on the road had had most disastrous effects on my trip. It had prevented my stopping to hunt the family of lions at Bimbas, had made me struggle on slowly with only five or six men, and had kept me to the main road when there was better shooting on either side of it. The telegram had apparently been held up by the telegraph clerk of the post, who had put up a very effective one-man strike for higher pay.

The valley of the Calunga River where Quillenges lies was covered at this season of the year, the spring, with young green grass, giving excellent grazing to the large herds of cattle, which make this district one of the richest in Angola. The commonest trees in the valleys are baobabs and acacias, and on the hills between them grow bush and small timber. To north and east of the post the hills rise abruptly, while to the south are more hills over which we must climb as we march south to Lubango.

The Quillenge people are tall and robust, and once were warlike, but now are lazy, confining their work to the herding of cattle; the women doing most of the agriculture. The girls wear wooden anklets if virgins, and it is a great offence for the parent to allow a girl to continue to wear them if no longer innocent. The women spend a good deal of time in plaiting beads into innumerable ringlets in their remarkable coiffures.

Most villages have a shelter, where the people spend a good deal of time talking; for they are garrulous and, what often goes with it, fond of drink; and their morals are lax, for adultery is not discouraged by the husbands, who benefit financially by the indiscretion of their wives.

On the death of a Quillenge, there is much feasting and noise, and the dead man's heir has to supply meat to the whole village. If the dead man is a Chief, he is dressed in gala clothes before internment, and is buried, as were many ancient Europeans, in a prepared ox-hide.

Besides the court-house, and the quarters of the Civil Administrator of the district, there are about a dozen stores at Quillenges, where trade is very brisk, especially in cattle, more numerous here than elsewhere in Angola.

It was nearly a week before the Administrator of Quillenges could procure me even eight carriers, so prosperous are these pastoral people, but they arrived at last on the evening of the 27th October, and the march south was resumed.

Six miles along the road we found a store, with its hospitable Portuguese owner and his English guest, a Mr. Cooper, who was trying with little success to buy cattle and wagons and arrange for herdsmen and drivers to take them to the great diamond field of the distant Kasai district. From this store at Bonga a four hours' march brought us to another at Lucando, and another four hours' scramble over the hills to camp at a village near Condombas. The next day was spent climbing and ascending a still higher range of hills to a store called Matakas, where my carriers did not arrive till dark, and my first meal since early morning was taken at midnight.

The land had been rising all the way from Quillenges, and was now well over 3000 feet above sea-level; while the comparatively well-watered country was pretty with green glade and leafed forest.

A march of 20 miles the next day brought us to the Cacoluvar River and two small farms of Portuguese settlers, wan, barefooted, and poorly dressed, who were living like the poor in Portugal, though in a country where white poverty is impossible; for the European cannot tolerate the African sun and its climate in conditions similar to those of the negro race, which has survived them for centuries. Africa is not yet ready for the poor white settler. A kindly honest folk were these peasant Portuguese, who offered the traveller of their best, and were grateful for the drugs, dressings, and little luxuries given them.

On the 29th October we marched for three hours along a cart road which wound its way up the hills to Lubango, the capital of the Huilla district, and the manner of our entry was unfortunate, for I had arrested a wagon driver for flogging a young ox with fiendish cruelty, and was obliged immediately on arrival to take him to the police station to be dealt with.

CHAPTER XII

MY JOURNEY IN THE PLATEAU AND DESERT LAND OF SOUTH ANGOLA AND ALONG THE SOUTHERN RAILWAY

I HAVE told how an arid coast belt, growing wider and more desert to the south, lies between the sea and the mountains which form the western walls of the highlands and plateaux of Angola.

It has been said that mark of wave on granite cliffs, and sign of shells beneath them, show that the sea once rode to some of these hills ; and what is now arid coast land was then beneath the sea. In my journey from Loanda across the coast belt, here narrow, and over the hills to Melanje and the northern highlands, there was too much grass in the coast land, where sand should be, too little of cliff-like form in the hills, to remind me of the sea. When I returned from the central highlands, 200 miles farther south to the coast, only the last abrupt descent from arid hills to a sandy shore recalled the story ; but this impression was lost again in my march south from Catengue through the foot-hills of the plateau, for the sea was too far westwards and the rise to the plateaux in the east too gradual.

It was only when I climbed to Lubango, reached this highest southern plateau here pushed out bastion-like towards the coast, and looked from a height of 5000 feet down past a rampart of sheer granite cliff over a seaward desert plain, that I knew that these hills had once overlooked the ocean.

I felt that through some mighty freak of nature, by sudden rise of earth's crust and by receding seas, these sheer cliffs had known the roar of wave and rush of salt sea winds; that the sandy plain before me was then deep below the ocean, and the summits of the hills scattered in it just rose as coastwise rocks above the waters.

If in the north and centre of Angola the coastward wall of the highlands lies broken, and the rise to higher plateaux is by terraced hills cut by many a valley, here in the south, mile on mile, was a rampart so steep, so rugged, so crowned with granite dome and crag and pillar, as to give the picture of some gigantic fortressed city. South of the great bastion of Lubango and Huilla, the mountain wall ran straight and sheer for nigh 100 miles, till another bastion stood out towards the sea in the very south to form the northern escarpment of the Cunene River.

From its highest levels, some 5000 feet, near Lubango and Huilla, the southern section of the Angolan plateau slopes gradually eastwards towards the upper reaches of the Cunene River, 150 miles away, and beyond it even greater distances to the Cubango and then the Coando, mighty rivers both, which flow, the one into a desert lake, the other to the Zambezi and the Indian Ocean.

This eastern portion of the southern plateau is a land of great distances, hot and little inhabited, but it once was filled with game. Most of the great animals still roam its empty spaces, and in the marshes of the rivers and the fly belts of the forests yet find refuge from extermination by that great enemy of all wild things, the Boer hunter with his wagon.

To the south this plateau slopes to the lower reaches of the Cunene, to form the northern escarpment of this river, which in its encircling course bounds the western section of this southern plateau to the east and south.

In this high plateau are green glades and forests, mountain streams and waterfalls. Townships and villages have come, like Lubango, Huilla, and Chibia, with their two or three thousand white people, and villages of natives; while here and there are solitary farms of Boers, rough homesteads with just a few acres of mealie corn to give the owner bread, as the meadow land provides with grass the oxen of his long wagon span. For the Boer lives by hunting still; he has killed most of the animals on these beautiful highland slopes and valleys, and now drives his long wagon team to the Cunene, Cubango, or Cuando Rivers, where he can still shoot to his heart's content, until the wagon creaks under the load of skins of what had once been beautiful wild things.

Sometimes he goes down to hunt the seaward desert plains where, instead of the green of glade and meadow, and the running brook near his homestead, there is the yellow of sand and grey of leafless tree and granite boulder; where the mountain stream of the hills has hurried below the ground as if fearing its death in the fierce heat and dust of the plain, fearing it except when in the flush of summer rain it can come overground, a yellow, foam-flecked torrent, racing down a dry stream bed, to pass—and leave it dry.

The Boer has destroyed the game life of this country as he destroyed it round his homestead in the higher plateau, and lives to destroy it in the south-eastern plains of Angola; for when I wandered in the desert to hunt and photograph the game, there was so little of animal life that I killed but one spring buck for food, and forbore to disturb and destroy the few hunted creatures that still found refuge in the scrub.

There were compensations for the lack of game in watching the Chella Mountains from the plain below them. It was delightful in those cool hours before daylight and at sunset to see the great wall of the Chellas turn from black to purple, and from purple to pink and red and gold, and see lights and shadows come where there had been a monotone of colour. There was ever before me the wondrous monolith of Cha Molundu, overtopping the other granite peaks and columns; while near me, rising above the yellows and blacks of the scrub, were the bare granite shapes of Pedra Grande and Pedra Pequena, the saw-like crest of the Serra Cachimba, and in the distance the Montes Negro.

Now empty of the animal life that once roamed over it, there was a great silence in this desert country, a silence that has succeeded the deadly trail of the Boer hunter from the Cape northwards and then westwards till it found Angola.

This coast belt appears to be of Tertiary formation. For the first 20 miles and more from the sea its surface consists of sand, and beds of recent clay where once the rivers ran the whole year round, and still bring alluvia from the hills in flood-time, though otherwise seeking the sea beneath the sand. Under sand and clay and on the broken hillsides there are sedimentary rocks of sand and limestone set with fossil sea shells of all ages of the Tertiary period.

Where the scrub commences is the region of the Primary rocks, which run mainly at right angles to the shore, as the sedimentary formations run parallel to it. Here are dark rocks of basalt and reddish ones of porphyry, rocks of gneiss and schists and granite. Towering over the plain are great monoliths of granite and gneiss; bare of all vegetation, they are sometimes cupped in places, providing water cisterns for the animals and wandering tribes of the country.

The rounded stones and the fossil sea shells looked, to my inexperienced eyes, to confirm the theory that this land had once been under the sea, and the position of old landing pillars, now far above high tidal mark, seemed to show that the sea was still receding from the present shore.

The movements of the earth of this part of Africa, and the steady drying up of the south-west portion of that continent by turning the rivers dry, have driven away the animals that once lived in them, for hippopotamus teeth and tracks have been found in dry river-beds in Angola and the countries to the south and west.

The animal life of this region, once numbering thousands of graceful spring buck, oryx, and zebra, numerous eland and duiker (and sometimes even elephant and rhinoceros near the foot-hills), used to attract a large number of lions and leopards; and wild dogs were abundant here fifty years ago. To-day nearly all these have gone, but there are still some of the smaller animals, ratels, jackals, and genets; while I found a few birds, including the sand grouse and guinea-fowl, and heard that duck of many kinds and even flamingos and pelicans came here in the rainy season, when there was water in the country. Of other birds I saw several long-tailed doves, and near the sea the white-headed crow.

Where the scrub commences there are stunted acacias and tamarisks, but very few euphorbias; while the baobab is not met with till well within the zone of scrub. To the south of Mossamedes is that curious octopus-like plant, the *Welwitschia mirabilis*, which is described in the chapter on the plant life of Angola.

The people of the southern coastal zone include the Mondombes, whom we have already met. Farther south are two coast tribes, the Ba Cuando and Ba Cuisso, and still farther south the Ba Chimba. All these people appear to be an admixture of the Bushman with the Bantu. These tribes are partly pastoral, but are generally wanderers and hunters. They wear few clothes, often just a skin apron, with necklace of beads and bangles on arm and ankle. They smear their bodies with oil or butter, and most of their women have an elaborately arranged head-dress.

All these tribes seem to have some knowledge of a beneficent deity as well as evil spirits.

Amongst some of these people, when the older folk are unable any longer to move with the tribes, they are knocked on the head by their relatives, and there is no burial, the body being left in the desert. The Ba Coroca, another tribe in the south, do have a funeral procession which carries the corpse wrapped in cloth (or, if a Chief, in a black ox-hide) to where it will be left. As no man may see a corpse on the ground, the mourners, who are in single file, hand the body from one to the other, each running away after handing it over, until the last has thrown the body to the ground, to race back to the village after his fellows, without looking back.

There are few permanent villages in this desert country; where there are huts these are but rough shelters of bush and grass, or even, as with the Ba Cuisso, just a circle of stones to shelter them from the wind.

The morals of most of the tribes are as primitive as their clothing or their ideas of cleanliness. Adultery is encouraged in order to bring profit, and a rich lover is permitted visits for the fines he pays in cattle.

The southern province of Angola is divided into the districts of Mossamedes, with headquarters at the port of this name; and of Huilla, where the chief town is Lubango; though there are two other townships of Huilla and Chibia. A Governor is in residence at Mossamedes and Lubango, and a new Governorship has just been formed for the south-eastern portion of the colony. At Lubango there are a number of Europeans, mostly Portuguese traders and officials, and in this town lives the Director of the Mossamedes Company, which holds mining and farm concessions over most of the uplands of southern Angola. There might have come wealth and prosperity to this Company had the settlers on the land been other than Boers, who seem incapable of developing it, and the governing power being other than Portugal, which has been slow to take advantage of the colony's natural wealth.

As things are, the Company has not flourished, and its concessions seem likely to end. The little railway which it financed, a toy affair like the familiar Decauville of France, crosses the desert country from Mossamedes due eastwards for some 50 miles through desert, and north-eastwards through scrub jungle and up the Moninho valley for a similar distance to Humbia, the present terminus. One day the line will come to Lubango, circling round to find a gap behind the bastion, which it cannot climb directly.

And Lubango is preparing for that day: a great hotel is to be built on a hillside above the town, a lake is being dug, and the water of a mountain stream brought to it to form a reservoir of water-power for all the light and machinery of the town. I know one Portuguese at least, Senhor Miranda, of Casa Pia, who hopes and waits for better days, but works and helps the town's fortunes and his own in the meantime.

When I left Lubango for the desert country and Mossamedes, the first part of my journey was over a splendid motor road which ran from Lubango to the rail-head at Humbia. This road was wonderful, not only in its surface and gradients, but in the glimpses it gave of the scenery in the Chella Mountains. For nearly 30 miles the road passed over hill and dale, by mountain streams, past forest and occasional farm, till we came to a pass in a rampart of the Chellas; and then down the pass we rode at 20 miles an hour. Our motor-bus was greatly overfull and dangerously overloaded, but the Portuguese driver cared not a rap for that, nor, I believe, did the passengers, men and women. Would the brakes hold? Well! That had to be seen. We had been late in starting, and ahead lay the bi-weekly train. One forgot weak brakes and possible disaster in the glory of the view.

The road twisted and turned down the steep paths; often on one side was sheer cliff and on the other a precipice; sometimes we saw the peaks of the Chellas above, at others the great arid plain below; here was a wondrous waterfall, there a verdant valley; and every view seemed beautiful. At last we swung round a corner, and there in the lowest valley lay the little railway station and the little toy train.

Though only 100 miles from Huilla to Mossamedes, the journey takes over twelve hours, and at times our "express" steamed so slowly that the guard could run alongside of it for exercise. I look back on that tiring night journey with anything but regret, because after many years I saw again the sun set and rise in a desert.

As the train moved westwards towards the sea it passed through country which became ever more barren; until within 20 miles of the coast there was not a bush or even a blade of grass to be seen, but only rolling sand-dunes with here and there reefs of rock emerging from the sand. Just before Mossamedes one passes from empty desert to an oasis where plantations have grown up in the bed of the Giraul River, one of those streams whose water runs below the sandy bed for all the year except when storm water floods its surface.

The town of Mossamedes, with perhaps 3000 white people, lies at the head of an open bay. It is an old-world place, founded in 1787; its fort, palace, and church overlooking the sea are the solid buildings of a former century, with that dignity that never seems quite to come from the modern buildings.

Surrounded by desert, Mossamedes is the healthiest of the Angolan ports. The cold current that sweeps round these shores from the southern ocean brings coolness where otherwise there would be heat; though it does bring a fog in winter when there is sunshine in similar latitudes on the opposite coast of Africa.

If there is monotony in the glare of the white houses and the yellow sand for those who always live there, these whites and yellows give such contrasts with the blue of the water in the bay that there is compensation at least to those who see it for the first time.

As in many other places along the African coast, otherwise lonely to an Englishman, it is gladsome to see the flag of the British Eastern Telegraph Company, and know that under the roof that flies it there is always to be found that splendid hospitality which distinguishes its officials.

PART II

THE COLONY

ITS PAST, PEOPLE, ANIMALS, PHYSICAL FEATURES, FARMING, PLANTS, AND FUTURE

CHAPTER XIII

How the Portuguese took and held Angola

THE galleys of King Necho of Egypt, manned by Phœnician seamen, must have sailed past the shores of Angola in 600 B.C. on this the earliest known circumnavigation of Africa; as must the little Western ship, whose prow Eudoxes found on the eastern coast of Africa; but it is probable that many travellers, including the Etruscans, had preceded even the Phœnicians in the search for the precious wares of Africa.

The voyages of Hanno, the Carthaginian admiral, who two thousand five hundred years ago sailed, with scores of ships and thousands of people, to found colonies on the West African coast, and those of the Phœnician traders, foreshadowed the existence of mighty states and an African culture established there possibly hundreds of years before their arrival.

The discovery of monument and script, by Frobenius and others, in Western Africa, shows that an ancient coastal empire, which may have been Atlantis, existed where is now Yorubaland. This civilization possibly may have owed its origin to distant Tyre and Etruria, while great empires inland to this coast acknowledged their metropolis in far Byzantium, and a culture brought thence by people from the East, across so-called unknown Africa. These ancient West African civilizations, which may have found their original impulse in Etruscan and Byzantine culture, influenced in the coastal provinces by later Phœnician and Carthaginian intercourse, and in the interior by that of Persia and Nubia, were adversely affected many centuries later by the coming of Islam from the North, which brought with it, not a new and higher culture, as has been generally taught, but a destruction of much that was beautiful, and a degradation of what had been great.

The French claim for their Norman merchants of Dieppe the discovery, in the fourteenth century, of Senegambia and the Gold Coast; but it is to the Portuguese navigators of the fifteenth century that the discovery of most of the West African coast and islands is due.

It was that great Prince of Portugal, Henry "the Navigator," who first, and from 1415 onwards until his death, inspired his sailors and sent his ships to these unknown seas. It was the Portuguese who rediscovered most of the West African islands, and sailed more than any other nation along the uncharted coast of Africa.

Though Prince Henry had been granted power by the Pope to annex those lands "from West to East" which he discovered, his navigators were content to place just a wooden cross, with the Prince's crest, where the little 100-ton ships bore them, and it was not till Don João came to the throne of Portugal that he made use of the Pope's authority, took possession of the Coast, and assumed the title of Lord of Guinea.

João the Second bade his sea captains "erect in prominent places, pillars of the height of two men, bearing the escutcheon of the Royal House of Portugal, and on each side of this crest one inscription in Portuguese and another in Latin, to state which King of Portugal had sent them, and when and by which navigator the pillar had been erected." Each pillar was to be surmounted by a stone cross affixed to it in lead.

So it was that the Portuguese passed from explorers to conquerors; and the first of these pillars of discovery and sovereignty, which were later to be placed in many parts of Africa and India, was erected by Diego Cão in 1485, when he entered the River Congo, and negotiated a treaty of commerce with the ruler of the country whose vassal states were Loango and Angola.

Dapper, the Dutch historian of Africa, who wrote in 1668, and Cavazzi, the Italian monk, who wrote in 1687, have described this mighty kingdom, which comprised much of what is now the French, Portuguese, and Belgian Congo and the province of Angola, ruled by the Mani Congo, who, to quote Dapper, was Lord of the Congo and overlord of Angola and numerous other states, Monarch of the Ambundo, and Lord of the Mighty River Zaire (the Congo). The ruling class was of Bantu stock, who had invaded the country within recent times, from the east, overcoming the original negroid peoples, whom they had conquered and enslaved.

Diego Cão sent a small party of his people to visit the Mani Congo, whose "Banza" or capital was where San Salvador now stands. Impatient of their return or overcome by an ambition to carry back to the King of Portugal hostages from the newly discovered kingdom, Diego sailed back to Lisbon with a number of African chiefs, who had been visiting his ship, and without waiting for his own envoys. He comforted the terrified natives on his ships and their friends ashore when leaving, by promising to bring his captives back in a few months, when he returned to fetch his crew.

The African nobles received every kindness from the King and people of Portugal, and went back to the Congo a year afterwards with Diego Cão, content and laden with presents. When the Portuguese ships arrived in the Congo, they found a great crowd of natives awaiting them on the shore, and among them those Portuguese whom Diego Cão had left behind, and who had been well treated in his absence.

It must have been a strange and moving scene, the arrival of the little Portuguese caravels, the return of the Africans with their rich clothes and stories of distant Portugal, and the meeting of the sailors fresh from home with their comrades who had lived with African savages for more than a year, hoping against hope for a sight of the familiar high-decked ships and the royal flag of Portugal. It was possibly these lonely men who carved on rocks near San Salvador those inscriptions and names of Diego Cão's company, which were only rediscovered a few years ago, after they had been hidden in the forest for centuries.

On his second expedition Diego Cão not only sent ambassadors to the Congo capital, but proceeding south, along the coast of Angola, discovered the bay which he called Santa Maria, and the cape which he called Negro; here he placed two more pillars, one at each place, dying shortly after.

The Congo King sent a number of his young nobles with presents to Portugal, with the request that priests might be sent to teach his people the Christian religion, and merchants to establish a trade between his country and Portugal. The first Catholic mission from Portugal arrived in the Congo in 1490, founded the Portuguese settlement of San Salvador in the native capital, and built there a church. The reigning King of the Congo accepted the protectorate of the Portuguese, was baptized with all his court, and given the title of King João, after the reigning Portuguese monarch. It is said that, at the first reception of the Portuguese mission, the King sat upon an ivory throne, wearing a hat of palm fibre and a coat of beautiful antelope skin; while from his shoulder there hung down an antelope tail. The army of the king, in three lines and with many drummers, made such shouting as had never been heard before. The King and his court, dazzled by the splendour of the Roman ritual, the gifts of holy medallions, crucifixes, and sacred pictures, and the delightful method of baptism, which consisted in the eating of salt, a rare and much-sought-after commodity, became enthusiastic converts to the faith. At this period the King would have ordered the death of any of his subjects who refused baptism, but his ardour for Christianity rapidly cooled when he found objection taken to the number of his wives. This prohibition by the Church was a much more serious matter than what he had looked upon merely as a change of gods and sacrifices, and the King at once reverted to paganism.

The elder of the King's two sons, called Don Alfonso, accepted the marital sacrament, became a devout Catholic, and endeavoured to spread the faith; while his younger brother took advantage of this to embitter the King against the heir, with the hope of gaining the throne for himself. He persuaded the King that Alfonso, through the magic of the Christians, flew nightly to the King's harem and away with one or other of his favourite wives, and although Alfonso was able to disprove this absurd story, even to the superstitious Congo King, the latter never quite forgave his son, who he still believed was making use of the magic of the white priests to destroy his authority.

On the King's death in 1509, Alfonso advanced with only thirty-six Christians to claim his throne, and is supposed, through the intervention of St. James, who appeared in a cloud accompanued by a numerous cavalcade of angels, to have gained a great victory over his brother's immense pagan army. This victory, and others which he obtained later—probably by the help of the Portuguese—the priests ascribed to divine intervention, and thus obtained a firmer hold than ever on the country, and spread their missions still more widely over it. It is possible that the elaborate ritual of the Roman Church, with its crucifixes and medallions, stimulated the very custom of fetish and charm which it was its purpose to destroy, and made more difficult the work of conversion.

But it is to these early Portuguese missions, and especially that of Fernando Po, who visited Benin, that we are indebted for our scanty information of the early history of Africa. The Congo kingdom which the Portuguese visited in the fifteenth century was of comparatively modern creation, but possibly its predecessors—like Benin and other older negro states of the West—had at one time paid tribute and acknowledged allegiance to a great prince called Ogane, who lived "twenty moons of travel away east." Ogane himself was never seen by the ambassadors of the West African kingdoms, but lived in mysterious seclusion behind endless curtains in a great court, from which he would send to his feudatory chiefs, by their ambassador, a helmet of brass, a sceptre, and a cross, as the symbols of their chieftainship and authority under him.

Though some have considered that this Ogane was the chief of the State of Gana in the Sudan, my own feeling, after reading numerous descriptions of the court of Prester John, is that it was this mystic potentate, who, though 3000 miles away in the east, was acknowledged from the west of Africa, and this belief gains support from the time taken on the journey and the emblem of the cross carried by the ambassadors.

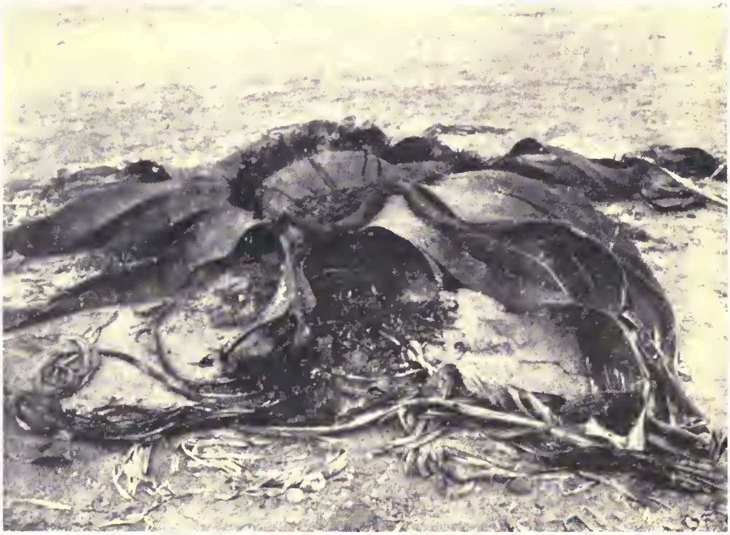
Their discovery of Brazil and the Indies so absorbed the Portuguese, that neither of their great navigators, Bartholomew Diaz nor Vasco da Gama, visited any ports in the Congo or Angola in their voyage round the African coasts. These colonies were left to lesser expeditions from Portugal; to Catholic missions and the merchants who had long plied a trade between San Thomé and the Congo ports, and turned their attention to the Angolan port of Loanda at the beginning of the sixteenth century. The King of the Congo, who was overlord of Angola, jealous of the growing power of his vassal, tried hard to prevent this trade—but the Angolan Chief replied by sending his ambassador to the Portuguese to beg for protection and the teaching of the Christian faith.

Catherine of Portugal sent out Paulo Diaz with three ships to Angola, where they arrived in 1560, after visiting San Thomé to fetch a Catholic mission from that island. After a friendly reception from the people, Diaz with twenty of his men went inland from the mouth of the River Coanza, where they had landed, to the native capital, bidding his ship's company sail away if they failed to return in a brief space. The Angolan chief tried to detain the Portuguese, but a native rebellion helped him to return to his ship and to Lisbon.

Diaz returned to Angola in 1575 with 350 men, and landed on the island of Loanda, welcomed by its King and people and some forty Portuguese who had emigrated from the Congo to Loanda, where they built a church. After living in amity

"JIMMY" SITTING ON MY HAT AND WEARING HIS HARNESS

[*See page* 136



WELWITSCHIA MIRABILIS — THE OCTOPUS-LIKE PLANT OF THE DESERT, SOMETIMES 10 FEET ACROSS AND A HUNDRED YEARS OLD

[*See page* 160

MOSSAMEDES PORT AND TOWN IN THE SOUTHERN DESERT

THE EASTERN TELEGRAPH COMPANY'S HOUSE AT MOSSAMEDES

[*See page* 164

for three years with the natives, the Portuguese were treacherously attacked and nearly all massacred. This attack was probably instigated by the King of the Congo, who was jealous of the prestige and commerce which the presence of the Portuguese brought to his vassal state of Angola.

There is no contemporary reference in Brito to the story related in the *Catalogue of the Governors of Angola*—written two hundred years later—that the rising was due to the treachery of a renegade Portuguese, who secretly advised the Angolan King that the white men were plotting his overthrow and the conquest of the country. This story goes on to say that the Angolan King, on the counsel of his "macotas" or head-men, sent for the Portuguese and accused them of treachery; then, feigning to accept their denial of the plot, induced them to make an expedition to the interior, where they were ambushed and massacred with a thousand of their native Christians. The outlying Portuguese settlers were murdered at the same time, and the renegade who had betrayed his comrades was executed by the King, who declared him unfit to survive them. The King then endeavoured to entrap the remnants of the Portuguese, 150 men and two guns, who were with Diaz, on a journey from Loanda, but they retired to the fort of Anzelle, and so decisively defeated the hordes of natives sent to attack him, that the King, repenting of his treachery, slew all the counsellors who had advised him to this course. Diaz, reinforced, attacked the natives, defeating them in a battle in the district of

Quissama, and subduing neighbouring territories of Ilamba and Dongo, founded a new town and church at Macunde.

Three years later occurred another war, and another great victory near Cambambe, where, with a small Portuguese force and his native auxiliaries, Diaz defeated a large native army. This victory overawed the natives for a time, but the latter, realizing how numerically weak the Portuguese were, and how rarely reinforced, repeatedly rebelled; forcing Diaz to establish another base, Massangano, at the junction of the Rivers Coanza and Lucala. King Philip the First again sent troops from Portugal, under João Valez; and with these forces Diaz endeavoured, with varying fortune, to hold and extend the area round Loanda and Massangano. At the same time he founded a post at Benguella Velha, which was shortly afterwards destroyed by the natives, who massacred the garrison when fishing from the beach.

Luiz Serrão succeeded to the Governorship on the death of Diaz in 1589, and a year later commenced a expedition to the River Lucala, with the object of destroying the capital or Banza of the Dongo, situated beyond it and near where Pungo Andongo is to-day. This expedition was unsuccessful, and the Portuguese were forced to retreat to Massangano, a remnant of the force alone escaping.

Luiz Pereira became temporary Governor until the arrival from Portugal of Don Francisco D'Almeida in July 1592, with 400 infantry and thirty horses. The Jesuits, who wished to obtain for themselves temporal power in Angola, plotted against the Governor, and finally compelled him to retire and to nominate his brother Jeronymo to take over the office. The latter managed with prudence and tact to conciliate the opposition of the priests, and endeavoured further to extend Portuguese conquests towards the salt sources of Quissama and the silver mines of Cambambe in the interior. He was, however, drawn into an ambuscade by the Chief or Sova Cafuxe, and his force was practically exterminated.

João de Mendonca came out as Governor the next year with more Portuguese troops. He was accompanied by twelve white women, possibly the first ladies to arrive in Angola, who, needless to say, were married immediately on arrival. With the aid of the newly-arrived force, a post was established at Muxima in 1595, but the expedition, being defeated near the River Bengo, was unable to accomplish its main objective, that of defeating the Chief or Cafuxe.

The succeeding Governor, João Coutinho, died on a second expedition against Cafuxe soon after his arrival, but his successor, Manuel Pereira, who had been locally appointed, marching against this Angolan Chief in 1603, and defeating him in three big battles, captured the famous silver mines of Cambambe.

Manuel Forjaz, who succeeded as Governor, defeated a Dutch naval expedition sent to Loanda. He also endeavoured to communicate with the East African coast, and to this end formed an expedition which he placed under Balthazar de Aragão, who, however, failed to overcome the difficulty caused by climate and native opposition in this the first Portuguese attempt to cross Africa.

Bento Cardoso, who succeeded to the Governorship in 1611, after subduing various native rebellions with an iron hand, founded Ambaca, 80 miles beyond Massangano. Manuel Pereira, governing in 1603, was reappointed in 1615, and during his rule at Benguella built the fort of St. Philippe, and subjugated the neighbouring chiefs of Dombé.[1]

About this period, the end of the sixteenth century and the beginning of the seventeenth, an English prisoner of the Portuguese, named Andrew Battel, who had served in several Portuguese expeditions in Angola, and survived many adventures, was carried in one of their ships to Benguella Velha. He describes how he saw an army of the predatory tribe called the Jaggas, waiting to ford the River Cuvo and attack the local natives. The Portuguese, who were trafficking for slaves, arranged to buy any prisoners the Jaggas made, and ferried the attacking army over the river which had barred their way. The Jaggas, a more warlike tribe than the Benguellas, defeated the latter, slew and ate many and took a large number of slaves, whom they sold to the Portuguese at so low a price that they followed the Jaggas into the interior in order to obtain more.

When the Portuguese wished to leave the

country, the natives tried to prevent them, and only consented to their departure if one of the white men was left behind as hostage for their return. Andrew Battel being the only Englishman, was chosen for this purpose by the Portuguese, and remained for several months in the country, as the Portuguese did not return to fulfil their promise. He describes the Jaggas as roving outlaws, having no fixed homes or possessions, but "depending on war for the supply of all they wanted," who spent most of their time "continually triumphing, drinking, dancing, and banqueting with man's flesh." They marched through the country as a devastating army, living on the land, cutting down the palm trees rather than tap them for their wine, killing those who opposed them, and enslaving the rest. They killed all their own young children who were unfit to march with them, and they replenished their ranks from the youth of the countries they conquered. Battel says "they make war by enchantments, and take the Devil's counsel in all their exploits."

Superstitious to a degree, they reverence a great image encircled by elephants' teeth, each one surmounted by a dead man's skull; they always consult the witch doctors before making a journey or an attack. The Jagga Chief, wearing palm cloth across his middle, chains of shells in his long hair and round his neck, "his body carved and cut with sundry works and every day anointed with the fat of men, sitteth upon a stool" surrounded by warriors and witch doctors, and after such ceremonials the chief wizard, on handing the Great Jagga his "casengula," or axe, bids him kill a male child brought before him, so that strength and fortune may come to the adventure. On the death of such a Chief, two wives with limbs broken but still alive are buried with him.

Combined with their ruthless ferocity, was an iron discipline which accepted death at the hands of their own Chief for a failure or retreat. They extended their forays on at least one occasion to the very capital of the Congo kingdom, San Salvador, and even offered the Portuguese, who came there to trade with them, choice portions of human flesh as food.

In 1617, during the Governorship of Luiz de Vasconcellos, there commenced a war with a Chief called N'Zinga, which lasted many years. In 1621 one Chief sent his sister to Loanda to negotiate a peace with the Portuguese. This remarkable woman, who became a Christian and was baptized by the name of Anna Zinga, at first charmed the Portuguese with her intelligence, dignity, and apparent zeal for the faith, but as rapidly lost both their regard and her belief when she poisoned her brother, gained his throne, and readopted every pagan practice. She conquered the kingdom of Matamba and waged continual war with the Portuguese with the aid of armies of the savage and predatory Jaggas, whom she conquered by her personality and finally governed, outdoing them for twenty-eight years in their bloodthirsty practices.

The Queen would appear, on occasions of state, clad in lion or leopard skins, ornate with plumes, and armed with axe, sword, and bow, surrounded by some fifty warriors, whom, on pain of death, she insisted should dress as women and be called her wives, and from whom unfaithfulness was only tolerated if followed by the murder of their children in such liaisons. Her every venture was preceded by the sacrifice of man or babe, whom she slew with her own hands, and her invasions were terrible in their destruction, as they were skilfully planned. When over sixty years old, advancing age, or as some say the sight of a crucifix, caused the Queen to revert to Christianity and friendship with the Portuguese; and she became as terrible in her zeal for the faith as she had been in her pagan practices and discipline, martyrizing unwilling converts, and unchecked by the priests in her inhumanities. She died in the faith in 1663, at the age of over eighty years; and the kingdom which she had wrested from the fiercest of African tribes, and governed with iron will and discipline, crumbled in the weak hands of her successors to vassal states of Portugal.

During this period the Jesuits had again plotted against Portuguese power in Angola, several of them having in consequence to be sent back to Lisbon in disgrace.

While under the suzerainty of Spain, Portugal became involved in her wars with Holland. Since the beginning of the seventeenth century the Dutch had sent naval expeditions to the West Coast of Africa, in order to obtain slaves for their possessions in America. After several minor expeditions, which harried rather than conquered the Portuguese, a great fleet of twenty ships appeared off Loanda in August 1641. The Portuguese fled panic-stricken from Loanda on the coast to Massangano, their township of the interior.

When peace was declared in Europe between Holland and Portugal, a local truce was signed in Angola, but broken by the Dutch, who attacked, defeated, and captured Pedro Cazar, the Governor, and 187 troops on the River Bengo. The Portuguese Commander of Massangano managed through spies to liberate Pedro Cazar, and when a relief expedition sent from the Portuguese colony of Brazil, which had been infuriated by the loss of her slave traffic, arrived with Francisco Sottomaior in 1645, this officer, with the help of the Portuguese at Old Benguella, landed at Cape Ledo, marched to Massangano and relieved the garrison there from its siege by a force of Dutch and native troops.

Sottomaior died soon after, but Salvador de Sa Benevides, at the instance of Don João the Fourth of Portugal, sailed in 1648 from Rio de Janeiro with fifteen ships and 900 men, arrived off Loanda, and demanded the surrender of that town. The Dutch, who had 1000 white and many black troops, took refuge in the fortress of Loanda, and after repelling a first assault by the Portuguese surrendered to their numerically inferior enemies. After a thanksgiving service, and the rechristening of Loanda to the name of San Paulo da Assompçãon de Loanda (as it had been taken on

Assumption Day), Benevides drove the Dutch out of Benguella, Penda, and Loango, defeated and punished the Congo King and the Angolan Chiefs who had sided with the Dutch, and returned to Brazil in 1650.

On New Year's Day, 1666, a great battle occurred between 400 Portuguese and 6000 native auxiliaries, with two cannons, on the one side, and a mighty host of many thousands of the natives on the other. The victory which the Portuguese obtained on this day is commemorated in a painting in the church at Loanda.

Four years later a disaster almost as great as this victory was sustained by the Portuguese under João de Almeida, who in endeavouring to attack the native chief of Sonho was ambushed and his force practically destroyed.

Sequeira, the hero of the 1666 victory, again came to the assistance of the Portuguese in 1671, and leading an expedition against the capital of the Angolan King, the reputedly impregnable Pedras de Pungo Andongo, captured it and destroyed the King of Angola's army. The King in despair threw himself from a high rock, and his family and possessions were definitely forfeited to the Portuguese Crown.

Between 1671 and the end of the seventeenth century the little colony of Angola suffered from a series of revolts, not only from the natives of Quissama and Ambuilla, but also from among the Portuguese colonial troops, whose indiscipline, shown by the assassination of their splendid leader Luiz de Sequeira during a battle against the Gingas, came to a head in an open rebellion for more pay in 1694. The rebellion was only suppressed after the leader had been shot and many of the troops driven to the forests of the interior.

The influx of Italian Capuchin priests to Angola in the middle of the seventeenth century especially affected the province of Sonho, which became a stronghold of the Christian faith, and the attack on these people by the Portuguese at the instance and with the aid of the King of the Congo and the Jaggas, was as unfortunate as it was destructive; for after a preliminary success, the invaders were defeated and destroyed by the ability and courage of the Sonho chief, who taught his people to realize the feebleness of the firearms of the period, and to despise the presents which the Portuguese threw into the native ranks to produce cupidity and confusion. One Portuguese survivor of the expedition, sent back to Loanda with the ears of his dead comrades, warned his countrymen, and saved the town and fleet from destruction.

At the instance of Rome, Merolla, the historian of this campaign, actually preached against the slave trade in Sonho between 1683 and 1687, but limited his prohibition to heretics like the Dutch and English, and went so far as to excommunicate and punish those who disobeyed. The earlier methods of conversion used by the Catholic priests, such as baptism by the eating of salt (a luxury in the country), the distribution of crucifixes and medallions, and even the offer of a white wife to a king who otherwise refused conversion, were gradually changed to others more forceable and less alluring.

A blacksmith who claimed divinity was beaten till he disallowed it, an argument applied equally to a queen who preferred to continue the worship of her pagan gods.

The prohibition of polygamy by the priests was resented universally, and retaliation was effected in curious ways. The men would often create a false alarm of approaching wild beasts, and then hurriedly climb the nearest trees and laugh at the futile attempts of the often portly priests who struggled to imitate them. The women obtained their revenge by continual immoral overtures, which they knew would annoy the priests, and by adopting suggestive attitudes near the monastery, which compelled the harassed padres to build their walls so high as to baffle their fair tormentors.

Zeal was encouraged equally curiously. Carli, another priest and historian, who found 200 Christians adopting self-inflicted penance, beating each other with their hands, and carrying heavy logs of wood, increased it by placing whips and thongs in the hands of the zealots, and gained from the encounter by directing the converts to carry the logs of wood many miles to his monastery and for his use.

The next period of fifty years, from 1700 to 1750, was one of comparative peace, during which the commerce of the colony greatly increased; but this very prosperity brought about keen competition from Dutch, English, and French traders, to the detriment of the Portuguese at the ports of Ambriz, Loanda, Cabinda, and Pinda. In 1759 the famous native fortress of Pedras d'Enconge was captured by the Portuguese from the native Chief of Ambuilla.

Francisco de Sousa Coutinho, who was Governor between 1764 and 1773, instituted many reforms in the judicial customs, police, and hospital services of the colony. He built a large part of what is now the town of Loanda, including the fort of San Francisco, founded the fort of Novo Redondo, started foundries near the iron mines of Golungo, and proved himself one of the best Governors in Angolan history.

The remaining years of the eighteenth century were uneventful but for two campaigns, one in the north and the other in the south of the colony, against Angolan chiefs, both of which were successful.

The beginning of the nineteenth century was notable for the excellent Governorship of Antoni de Gama, who not only developed the mineral resources of Angola, but directed his attention to the exploration of this part of Africa, especially to the discovery of a route from Angola to the eastern Portuguese possessions on the Zambezi River.

Two native traders were dispatched from Angola in 1801 who managed to reach Cassembe, a town in Central Africa, where Francisco Lacerda, the Governor of Portuguese Zambezi, had arrived by an expedition from the East Coast some years earlier. The Angolan traders finally reached the East Coast in 1811, ten years after having left Loanda, and returned to Angola by the same route *via* Cassembe in 1815.

The years 1820 to 1836 were marked by great commercial progress in Angola, but also by much social unrest; a mutiny breaking out in the latter year among the white troops, whose discipline and prestige were only restored after a successful campaign, and the conquest of the district of Duke da Braganza. The abolition of the slave trade took place soon after, and brought about profound economic changes in the colony.

In May 1854, Livingstone completed at Loanda the first phase of his famous transcontinental journey, which, commenced in Barotseland and continued north to Loanda, ended at last at the mouth of the Zambezi on the East Coast of Africa.

Portugal's title to Angola, discovered and conquered by her adventurous and gallant sailors and soldiers, is confirmed by numerous modern treaties. The boundaries of Cabinda marching with the French Congo were defined by a treaty of 1886, those of the north and north-east (of Angola) towards the Belgian Congo by treaties of 1885, 1891, and 1894. The south-eastern frontier, continuous with Rhodesia, was settled in 1891 and 1905. The southern frontier, settled in 1886, touches that finger-like process which Germany pushed to the Zambezi in the moment of her power and as a sign manual of her ambition, and is being readjusted with Germany's successor, the Union of South Africa.

CHAPTER XIV

ANGOLAN TRIBES—THEIR ORIGIN AND RELIGION

THE natives of Angola, with the exception of a few Aboriginal people, are Bantus, a mixed Hamitic and Negro race, which now occupies practically all Africa south of the Equator. Physically akin to the three Sudanese Negro groups, the Bantu differs from them in culture and in his language of co-ordinated prefixes, where a prefix placed before a noun is equally applied to verb, adverb, and adjective in a sentence. From the other races of Africa, whether Hamitic, Semitic, Hova, or Aboriginal, he differs not only in speech and culture, but in physical character as well.

From their original home somewhere between Lake Tchad and the Congo, where, according to Johnston, they had known both Egyptian and Persian influence, the Bantu people migrated or were driven long ago to found new and widely distributed colonies. He considers that the date of this migration could not have been more than 2000 years ago, because the word for fowl, a bird only introduced to the Upper Nile about 400 B.C., is similar among all Bantu peoples, who must have known it in their original home before dispersal.

Moving, according to Johnston, first eastward to avoid the Congo forests which barred a southerly advance from their original home, the Bantus settled for a time in the region of the great lakes, whence they spread south-west and south-east, first conquering and then intermingling with the aboriginal dwarf people of Africa.

The period when the invasion reached Angola is uncertain. It has been placed as late as from the fourteenth to the sixteenth centuries. Though legends among the Angolan natives describe the great invasions of remote times as coming from the north and east, there had been so many minor and later translatory movements of tribes that the history of the Bantu occupation of the country is confused and obscure.

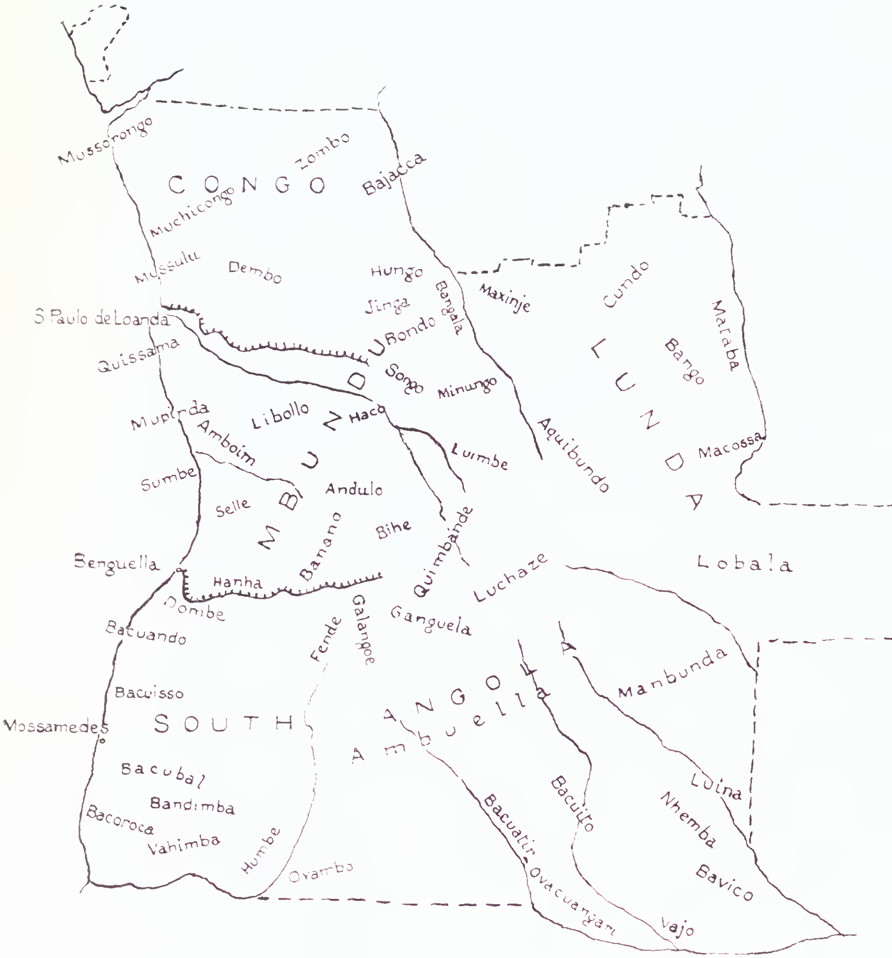
The natives of that part of Angola which I traversed spoke the Umbundu language, and could be grouped by link of speech, manners, and customs into a central group of tribes. Along the coast from north to south are the Mussulu, Quissama, Sumbe, and Selle; more inland, the Dombe, Libolle, Amboim, and Ba Nano; while warlike tribes like the Jingas, Bangalas, Bondos, Songhos, and Luimbes live along the Coango and Coanza Rivers, and others, such as the Bailundos, Bihés, Galangoes, and Quillenges, inhabit the central highlands and their eastern and southern slopes.

To the north of this group and in the Congo Province are the Congo or Ba Fiot people, speaking the Kishi Congo language, and allied by speech and customs to tribes beyond the river in the Belgian Congo. They comprise the Mussorongo and Muchicongo on the coast, and Zombo and Bajacca in the interior.

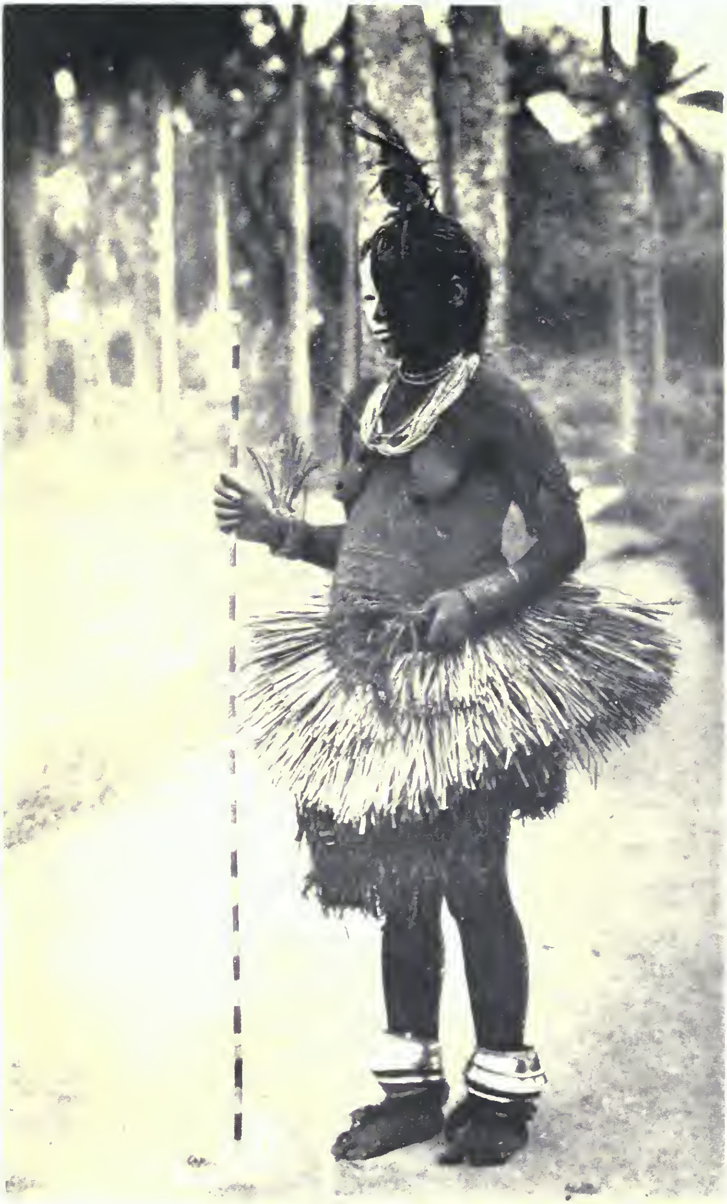
To the east of the Umbundu group and beyond the Coango River live a people speaking the Lunda language and more closely allied to the Congos than the Umbundus. Their greatest tribe is the Quioco. Lunda once comprised a great kingdom, with a Chief called the Muata Yamvo, whose court and customs were the subject of great interest in the last century.

In the south of Angola are a great number of tribes whose speech is more akin to Umbundu than Congo or Lunda, whose blood is much mixed with that of the primitive Bushman, and whose character, with the exception of the Ambuella, has been influenced by these primitive, hunting, and nomadic tribes.

One fact was obvious even to a traveller like myself: the tribes of the interior plateau were physically superior to those of the coast lands, and appeared to be of less mixed Bantu descent. These differences are due partly to the influence of the healthy and bracing climate of the uplands, affecting the native physique as favourably as the unhealthy and enervating coastal climate has deteriorated it. They are also due to the intermingling of the earlier Bantus with the original coastal and forest pygmy-like tribes, which has produced racial types like the Ba Tchemo and Ba Twa in the north and the Ba Cuando and Ba Cuisso in the south, while the later Bantu arrivals remaining in the uplands of the interior have retained a purer racial descent.


Mussorongo
Zombo
CONGO
Bajacca
Muchicongo
Mussulu
Dembo
Hungo
Jinga
Bangala
Maxinje
Cundo
Maraba
S. Paulo de Loanda
Quissama
Bondo
Songo
Minungo
LUNDA
Bango
Mupinda
Libollo
Haco
Amboim
Lumbe
Aquibundo
Macossa
MBUNDU
Sumbe
Selle
Andulo
Bihe
Banano
Quimbande
Benguella
Hanha
Dombe
Luchaze
Lobala
Bacuando
Galangue
Fende
Ganguela
Bacuisso
Manbunda
Mossamedes
SOUTH ANGOLA
Ambuella
Bacubal
Bandimba
Bacoroca
Vahimba
Humbe
Ovambo
Bacuatin
Bacuito
Ovacuangari
Luina
Nhemba
Bavico
Vajo

THE CONGO, MBUNDU, LUNDA, AND SOUTH ANGOLA LANGUAGE GROUPS OF THE TRIBES OF THE COLONY



"RARA AVIS"—A LADY WITCH DOCTOR

Between the typical Bantus and the type Aboriginal (Negrillo or Bushmen) who inhabit Angola, there are of course much greater differences than those observed between the natives of the uplands and coast. The type Bantu, influenced by his Hamitic strain, is taller and darker, with finer features, larger eyes, and less prominent cheek-bones than the Aboriginal, whose short and somewhat ungainly figure, yellow brown colour, very flat nose, small deep-set eyes, and prominent cheek-bones, place him at a considerable physical disadvantage to the Bantu.

These marked physical differences between the two peoples are accompanied by differences in speech and religious beliefs. The speech of the Bushman is as primitive as that of the Bantu is perfected, but there is little to choose between the religious beliefs of the two races, and in fact the ancestor- and nature-worship of the primitive peoples seems a purer cult than the spirit-worship influenced by magic and witch doctors of the Bantu peoples, which is not dissimilar to the Shamanism of the East.

In my journey in Angola there was no opportunity to study the beliefs of the primitive peoples, and this western Bantu spirit-worship was practically the only cult met with.

There was no trace of that ancient belief, with its mythology of sixteen divinities, similar to and possibly derived from that of Tyre and Etruria, which exists according to Frobenius in Nigerian Yorubaland, nor of that earliest Christian teaching which he considers came to the West Coast from Byzantium through Nubia fourteen hundred years ago, and left its mark in the Central Sudan and the West Coast kingdoms of Mossi and Nupe.

Mohammedan influence, which he considers degraded these ancient civilizations a thousand years ago, is still spreading in West Africa, but has influenced Angola very little, though, if it can destroy spirit-worship, it will redeem any misdeeds of the past and work for the good of Africa.

If the purer Etruscan and Coptic beliefs ever reached Angola in the past, they have now become so obscured by the cult of spirit-worship as to make the task of their rediscovery beyond the ability of a traveller, and the spirit-worship of modern Angola has itself been affected so greatly by the influence of Western civilization, that it has changed and is changing fast with the waning power of its priests or medicine-men, and the growing knowledge of the negro. This spirit-worship cannot be regarded now as other than a degraded cult, but it is still something more than the fear of evil spirits, worship of images called fetishes, and obedience to the power of the African priest or witch doctor, that many believe it to be, for there is a vague belief in a beneficent deity, who is called by the Angolan Bantus N'zambi, Zambi, Onzambi, and N'sambi in various parts of north and central Angola (the slight variation in pronunciation being entirely a question of dialect), and Suku in the south. This god, being considered beneficent, is not feared, and in consequence is not regarded or worshipped.

There is an omnipresent fear of evil spirits, but the spirit-worship it entails is complicated by magic and sorcery. The number and variety of the spirits is very great, and the people appear to believe in woodland elves and goblins as well as spirits.

The profession of its priests or witch doctors (called N'ganga) includes a great number of specialists, each dealing with one or other mental or physical malady, or devoting himself to the arts of divining, spiritualism, or rain-making; while the witch doctors work with a surprising wealth of ritual, incantations, taboos, and other devices.

Finally, a fetish is not an idol and is not worshipped, but may be considered as were charms and amulets in those mediæval days—objects which have acquired virtue through spiritual influence, brought about by the witch doctor in the one case or the blessing of some saintly Christian in the other; in fact, it is possible that the cult of the fetish was encouraged by the introduction of Christian charms, sacred images, medallions, and elaborate ritual into Angola four hundred years ago, and that the very Catholic faith that came to destroy idolatry unwittingly developed it.

In contrast with the negro's disregard of a vague but beneficent deity, who, he thinks, will not harm him and so need not be propitiated, is his dread of evil spirits, the souls of evil people come back from the tomb, to people the forest and haunt and harm the living, and which must for this reason be appeased.

There are certain spirits like our elves and fairies, which the hunters specially consult, as they are forest imps, but I was unable to discover the difference between them and the universally feared spirits. The spirits of evil people may come back to haunt the forest and river, the village and field, where they lived when in the flesh, and their presence dominates and terrorizes the life of the African savage. These evil spirits represent not only the evil dead, whom they once animated, they may also represent special ills, such as various diseases, which are even given the names of evil spirits. The spirit of the evil hunter may cause evil in hunting, that of the fisherman in fishing, of the husbandman to crops, and so on, and the sacrifice must be animal or fish or produce as the case may be, and be placed in forest, river, or field.

These spirits can be seen by the witch doctors but only heard by the layman; at least I have never met any one but a witch doctor who said he had seen one; and the description of these spirits was, as can be imagined, very conflicting and absurd.

No native will go alone into the forest at night, and even when in the house they will cower and refuse to look up if they believe they hear a ghost walking about them or crying out. This terror is, of course, taken full advantage of by the clever and unscrupulous witch doctor, or his imitators bent on theft.

Spirits, being evil, are feared, and being feared must be propitiated. Such propitiation is carried out by means of charms and amulets, called fetishes, from "Feitiço," the Portuguese word for a charm, as the Portuguese were the earliest of the modern Christian voyagers to meet the African.

Fetish-men or witch doctors are those persons who can see and deal with evil spirits, become mediums for them, propitiate and even control the spirits through charms and incantations. In some British West African possessions where the Portuguese word "Fetish" has not penetrated, the term "Ju-ju" is used for the charm, and "Ju-ju man" for witch doctor.

There is a nanalogy between the sorcerer, charm, and amulet of Europe and Asia, and the witch doctor and "Fetish" charm in Africa. The dress, gesticulations, incantations, and fetish paraphernalia of the witch doctor of Africa, and his black and white magic, are singularly reminiscent of what one reads of the sorcerer and his arts in other parts of the world, and appear to be still reflected in the tall hat and frock coat, professional manner, surgery and dispensary fittings, imposing instruments, and coloured bottles of the modern physician and druggist. Have not these auxiliaries a similar moral, hynotic, even suggestive effect on the patient, whether black or white?

Is not the spiritualism preached by some educated people to-day similar to that of the witch doctor when he embodies a spirit and becomes its medium, while the spirit speaks and acts through him? The cults of the childhood of man are too deep rooted to destroy completely. Through the spirit superstition he has fostered and the fetish he has introduced, the African witch doctor gained his power and livelihood, as did the European and Asiatic sorcerers with their devils, jinns, and amulets. In primeval days, physical force alone was regarded and respected. The man who could take his food from claw and talon, who could win his mate from his fellow-men ; such a man must necessarily have been physically strong, and the weakling children were killed off, either when born or in the terrible struggle for existence. Those weaklings who survived developed cunning to replace good strength, and from them probably came the first sorcerers, doctors, and artists. Though early forms of superstition and worship, born of dreams and nature portents, probably preceded the rise of the witch doctor, yet it is probable that the cunning weakling took to the earliest form of magic to ensure his possession of food and a mate in a community of strong and brave hunters ; and to increase his influence, surrounded his work with mystery and elaborate magic ritual.

If astuteness and cunning caused by physical infirmity helped to produce the earlier magicians, it is probable that this knowledge was transmitted to their offspring, and later generations of those skilled in sorcery and healing were taken from the same family. The medicine-man of modern Africa is even more often the son of a doctor father than the physician of Europe. The profession of witch doctoring in Angola includes that of medicine, witchcraft, divining, and rain-making, whose specialists are as numerous as those in Harley

Street; it has its courses of instruction and examination for initiates, a considerable degree of combination among its members (a kind of medical union in fact), and there may even be a standard of professional etiquette.

Serpa Pinto, who travelled in Angola fifty years ago, considered there were then three types of fetish-men in the country—the doctor, the diviner, and the wizard. The diviner foretold the future, or the cause of trouble in man or beast, village or house; the doctor treated the trouble if physical; the wizard dealt with it if supernatural and a spirit had to be exorcized. It was the wizard also who tried to discover if this evil spirit was without the body and could be coaxed or driven from house or village, or whether, embodied in a human being, this person could be tried by ordeal.

It is difficult to-day clearly to define and differentiate the witch doctors, as civilization has diminished their powers and practice.

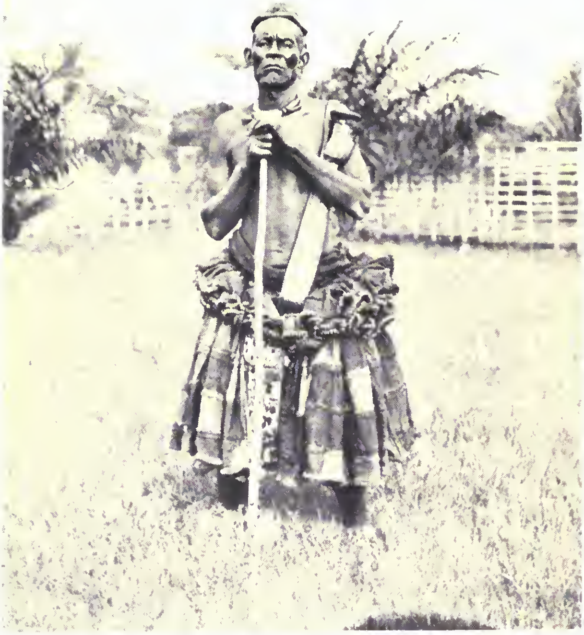
At the present time there is usually a witch doctor in each large village, who uses incantations as well as charms and drugs in his efforts at treatment; and if divining, caskets, and gourds full of seeds, bones of all kinds, antelope horns, fish scales, and other things as well.

After a vigorous shaking of the caskets and gourds, certain of the charms are thrown to the surface, and from their nature the diviner predicts and judges. He may in this way foretell that a person, or even a house or village, is bewitched, and then may call in another doctor to cure the person and exorcize the spirit or may deal with the case himself; for there are yet but few purely physical healers working with herbs, cupping and bleeding, counter-irritants and massage—nearly all such people I met were involved in witchcraft to some degree. In most cases, besides the medicine, a charm (fetish) is given to the patient who seeks relief; the nature of these charms or fetishes, which is very varied, is alluded to later in the chapter.

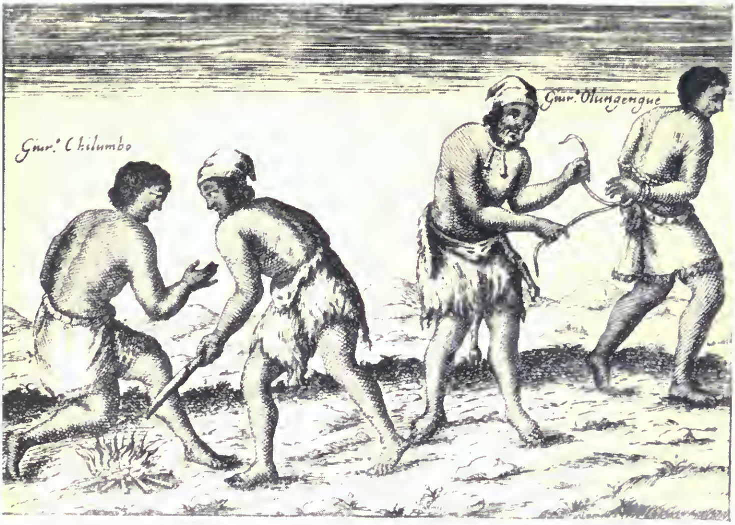
Among the group of medicine-men there may be a separate person specializing in rain.

The rain-maker is usually an elderly and observant native, who is really the African Meteorological Officer; and despite all his tricks and charms, probably depends a good deal on the effect of wind direction, temperature, and atmospheric pressure (as personally felt on an oppressive day) to help him in his forecasts. Though rarely at work, his fees are probably big ones.

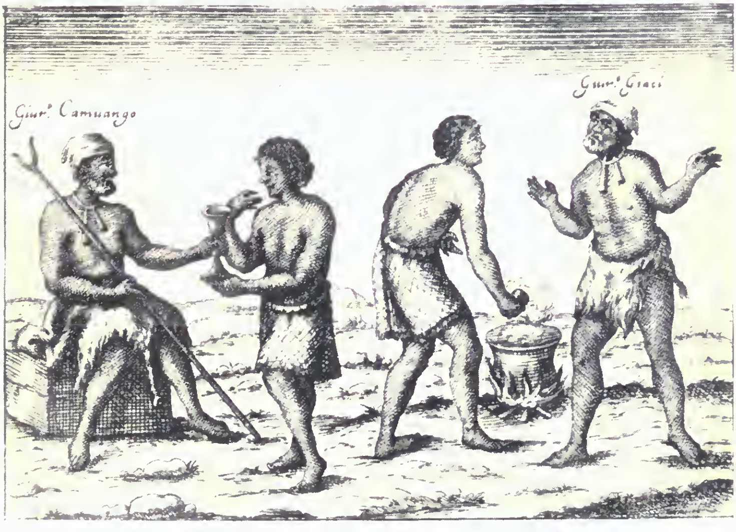
To impress his clients, the witch doctor not only builds a mysterious fetish house near the village where the dread spirit may live; he also, like every clever impresario, dresses his part, and so decorates himself with feathers, paint, shells, and charms of all kinds, as effectually to inspire respect and terror in the villages where he lives and operates. Once they have established a reputation, one or other of the group of witch doctors is consulted in every venture and misfortune: in hunting expeditions and war, for barrenness, sickness, drought, or deluge.



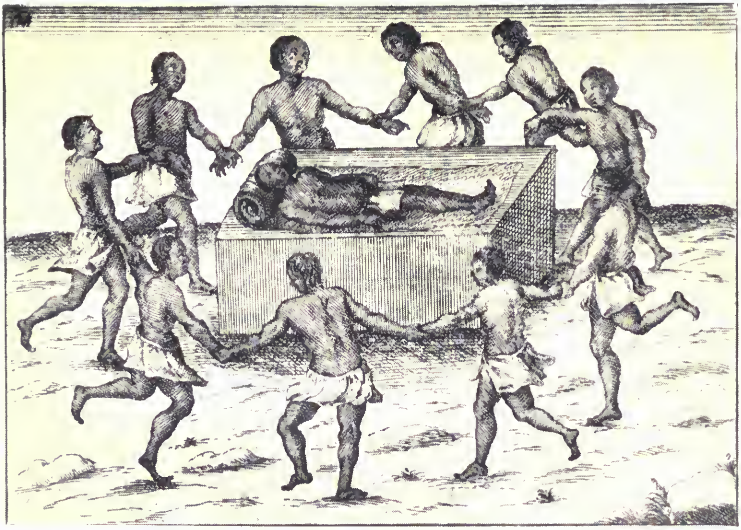
RAIN-MAKER


Giur.° Chilumbo
Giur.° Olungengue

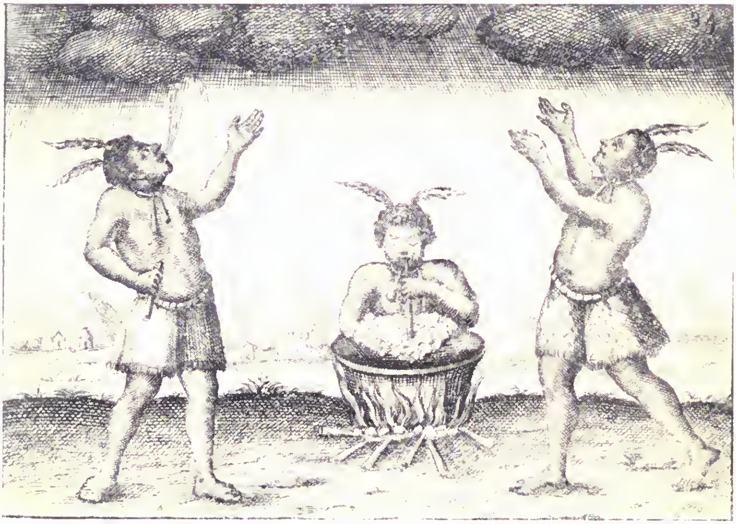
TRIAL BY FIRE ORDEAL
(After Cavazzi, 1687)


Giur.° Camuango
Giur.° Giaci

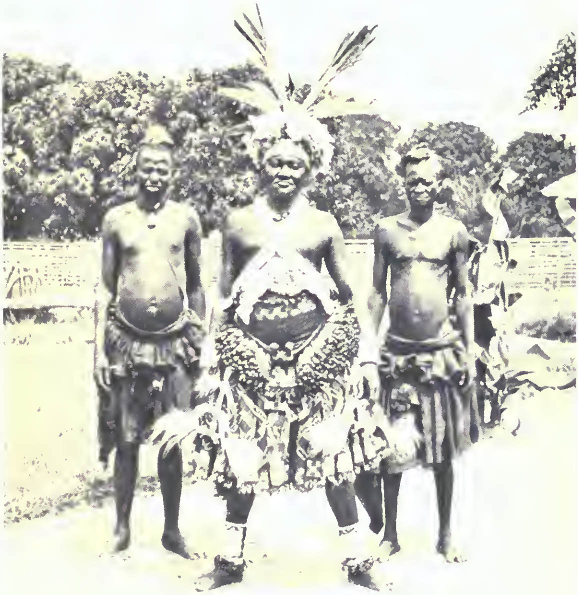
TRIAL BY POISON ORDEAL
(After Cavazzi, 1687)



A NATIVE FUNERAL DANCE
(After Cavazzi, 1687)



WITCH DOCTORS CALLING DOWN RAIN
(After Cavazzi, 1687)



A WITCH DOCTOR

With great astuteness, the fetish-men have established the belief that practically no severe illness or death comes naturally, but is due to the witching of the patient by enemies in the flesh or spirit. In this way, they may obtain a fee, both from those who consult them and also from those—and they are generally rich people—whom the medicine-men point to as the suspected bewitching agents. It is useless for the suspected person to urge innocence, for, if the usual propitiation of goats or oxen is not given to the accuser and the fetish-man, the latter orders a trial by ordeal. The "casca" or poison is prepared by the fetish-man himself, and so concocted that little is left to chance, and the accused is poisoned and found guilty and his property confiscated.

Trial by ordeal is carried out in a number of ways, among them being the placing of the hand in a hive, to see if the bees will sting it, or into fire or hot water; or by "casca," the bark of *Erythrophlæum guineensis*, which is cut up into small pieces, and infused in cold water, or, as occurs sometimes, in water which is heated by dropping in a number of hot pebbles.

The poisonous decoction, so prepared, has both emetic and purgative properties, and causes death if enough is taken; so that the victim's fate practically lies in the hand of the fetish-man who prepares the "casca."

The accused man is kept fasting in confinement on the night previous to the ordeal—which may consist in the drinking of the "casca" poison alone, or followed by his running through lines of mocking people or under a series of arches made by their wands. Woe betide the ailing wretch should he stumble or fall, for the "casca" has then decided against him; and those who were once his friends and even relations will fall on him without mercy and hack him to pieces.

When the slave trade was in force, those found guilty by ordeal were sold as slaves, and quite a number of slaves were obtained in this way, and sent down to the coast towns to be sold to the Portuguese slave dealers. Possibly quite as many slaves were obtained through witch trials as by war and capture; for as every illness or calamity was considered due to witchcraft, the number of accused was endless.

The fetish-man has other means of maintaining his sway, and his income, than by "casca" trials: by making and selling charms against every evil, and to ensure good luck. These charms, called "mokeeshoo," are of endless variety—shells, seeds, little wooden images, teeth, claws, and horns of various animals. Nearly every child carries a charm; and expectant mothers, and those who wish for children, wear and trust to them. Besides the charm used on the person, the family or the hut itself may have its fetish, and I have seen little figures, or even pieces of wood, decked out with rags, at the entrance to villages or the paths approaching them.

Fetish houses are probably more commonly seen in the north than towards the south of Angola. In these miniature huts, built generally near the entrance to villages, and painted in red, white, and black, there may be phallic symbols, or small figures of men and women carved quaintly but with a marked sexual character. These charms or fetishes are not idols, as Cavazzi, the old historian, thought, nor do natives worship them as he believed. They are more in the nature of blessed symbols, as were crucifixes or medallions to a Catholic Christian like Cavazzi, or the written passage from the Koran to a Mohammedan. The object that has become a charm or fetish was, the the native well knows, originally only a piece of carved wood, a seed, claw, or small piece of antelope horn; and he will sell any such object cheaply. It is only when the fetish-man has incanted over these objects, has placed within them some magic power (and so prepared them that they have become even the occasional home of a spirit), that they gain value, both monetary and spiritual.

The witch doctor usually puts magic into the object which is to become a charm, by placing it in a concoction which varies with the physician. The actual ingredients may be simple things—tacula dye, dung, or feathers are often used in Angola; or the witch doctor may place in the charm parts of powerful birds, dangerous animals, poisonous snakes, insects, and herbs, things expressing power and fear and dread. The personality of the wizard himself, his forcefulness and reputation, count for more than his particular medicine; as it counts with the modern physician to-day.

Even when an object is made potent and fetish by the native doctor, it is not worshipped by the client; it is sacrificed to at one time with libations of palm wine and gifts of food; it may be beaten at another to stimulate it to better action; and it will be despised and thrown away if it ceases to bring the required success. It is the favourite of the moment, and may be treated like all favourites in misfortune.

There are some fetishes, those of big chiefs and witch doctors, which may acquire a great reputation, and are hired out at heavy cost to different temporary owners.

Fetish houses, the miniature huts seen near villages, are a kind of communal charm where the evil spirit afflicting a village may be induced to retire and cease from persecution by illness, drought, or famine.

Fetishes are used for as many different purposes as they are different in shape, size, and origin. They are the medium to avert evil spirits from the owner or to transfer such evil to an enemy. They will propitiate the spirits of child-bearing, of health or prosperity, of hunting and fishing successes, and of disease or desire; they become ministers to every human emotion and ambition; behind them there stands their creator, all-powerful, cunning, cruel, and unscrupulous—the witch doctor.

Is it any wonder that this particular class of the African doctor group is rarely in need of fields, or cattle, or harem? Slowly but surely the light of reason and logic is forcing its way into the African's mental darkness; but the craft of the doctors is highly organized; they are powerful, and superstition dies hard. It is most difficult to free the negro from his bondage to superstition; Christianity rarely does it, the most ignorant convert being ever a pagan at heart, and even the most educated revert readily to fetish influence.

When I was stationed at Sierra Leone, on the west coast of Africa, in 1912, two secret societies called the "Leopard" and the "Crocodile" had just been tracked down and destroyed. Among the rites they practised were those of cannibalism; the victims being attacked by members of these bands with weapons like claws, and jaws resembling those of the leopard and crocodile. When these horrible societies were at last unmasked and their followers captured and tried, it was found that the ringleader was an educated negro. Such secret societies are rare in Angola. One was formed of the young men of the Lunda people when forbidden to smoke hemp by their elders. This society became ultimately a political and radical union directed against the more conservative elders. It was never religious in character.

It is usually the witch doctor who makes love philtres, much as the witch did in England years ago. These philtres are often made in Angola from the hair and nail parings of the beloved. Such things are supposed to have a special personal influence, as they are often taken from the bodies of dead chiefs and distributed among his people at the funeral. As totemism exists in an obscure form in Angola and taboos are recognized, the witch doctor has still another method of maintaining his hold on the people and augmenting his practice and income: by the imposition of prohibitions and penances. There is the prohibition or taboo of the partaking of some kind of food or drink, or of entering a certain house or district, or crossing some river or lake. Apart from any totemic reason such prohibitions are used to cure illness, to protect unborn children, to prevent calamity or to end it.

The witch doctor makes and breaks the taboo, and thus can add another knot to the bonds in which he holds his patients and clients. Some of the penances are, however, self-inflicted, and bear a close resemblance to penances imposed and carried out by Christians.

As an instance of fetish taboo rules I may mention the following incident.

On passing along the Longoé River in Angola I came across a shady well-built village which had been abandoned, and near it a miserable collection of huts without shade, where the Sova or Chief, his family, and the villagers had temporarily installed themselves. When the Chief was sent for to come and see me in the old village where I had taken up my quarters, he sent back a message to say that he could not come then, as the fetish-man had sent him away from the old village in consequence of illness, and it was taboo to return. I sympathized with the Chief's misfortune, and was preparing to send him some venison as a solace when, unable to resist the temptation, he stole across the forbidden ground to look at my meat supplies for himself. The Chief lost his present of meat, as he had placed the needs of his stomach above his respect for a white man, and further was much chaffed for having rendered himself fetish again.

There are curses similar to those still uttered by superstitious peoples in European countries; and as these curses can be carried out by the wizards through the medium of charms or fetishes, and can be broken in similar ways, the witch doctor has yet another hold on the people.

Fetishism may on occasions help the European traveller, for it is fetish for any native chief to injure or steal from a person whose hospitality he has accepted, and this is a most useful point to remember when travelling through hostile native territory. It is fetish also for a native to break any of a white man's property; and use can be made of this if there is danger or importunity, by letting a chief break an already cracked glass, or plate.

CHAPTER XV

CHARACTER, HABITS, AND CUSTOMS OF THE ANGOLA NATIVES

THE character of the native of Angola is much what the climate of his country has made him. In those parts of the colony where there is an abundant rainfall, a fertile soil, and plentiful game, life has been so readily maintained at a minimum cost of labour that the fortunate inhabitant has developed lazy habits; and the enervating climate which can so diminish the energy of a European has made the negro listless. With Nature herself helping him, the negro does no more than cultivate a plot of land equal to the needs of his family; and even this work is done by his women folk, except perhaps for the initial tilling and sowing; while the lord and master, when not idling and smoking, sets game traps, goes hunting or fishing, or collects rubber, honey, palm oil, wine, salt, or gum, when he feels inclined.

It is true that the hut is built by the husband, but this is a simple affair, made of saplings and grass taken from the surrounding forest.

The wives (for there are usually more than one) do all the household work, as well as most of the cultivation, and having little individuality, less liberty, and no rights, are content if by the result of their labour they can bring comfort to their owner, and by their fecundity bear him a large family; for children will, in their turn, work for the house and be a further source of wealth to their father.

These poor women are compelled to rise before daybreak to prepare the morning meal of infundi, or pound grain or tobacco for to-morrow's use. They must then go to till their fields of mandioc, ground-nuts, or millet; minding their babies, who spend their little lives slung on their mother's backs, as best they can.

My lord the husband, after lazily stretching himself in the sun and eating his breakfast, has, perchance, gone off to visit his game traps or set new ones, and on his return to the village will expect more food and attention from his hard-worked harem. In the evening, if palm wine is available or there is any excuse for merry-making or excitement, such as a big hunting success, or a death, much drink will be taken by the men, and if it can be spared, a little by the women too.

This drink may be wine from the self-fermented sap of the palm tree, or native beer prepared by fermenting *Eleusine coracana* (Luco), or germinated Indian corn mixed with mandioc root. "Garapa," as this beer is called, is not so heavy as the strongest palm wine, but either of these beverages is potent enough to help the dancing, singing, and drum-beating which always accompany a drinking bout.

In no other race can one find so many uncomfortable and even painful habits and customs as among the negroes of Africa, and the Angola native is no exception. Who but an African would chip his splendid teeth with an axe-head in order to sharpen them to his desire, or even remove some of them, as do the Humbé, Ovambo, and Ba Cubal tribes; or enlarge a hole in his ear till it will hold a small jam-pot; or scar his body with innumerable cuts in order to make tribal marks on his face, or fancy designs on his body, as do some of the Congo and Lunda people of Angola?

The negro's wife is even more insensible to discomfort than her mate; for beside all these painful mutilations that he will suffer, she will also wear shells in her nostrils, ornaments in her upper lip so large that it is difficult for her to eat, and bangles on her legs and arms so heavy that it must be an effort for her to move.

No one but an African could stand the rough-and-ready methods of their medicine-men, with the blunt and rusty knives or even sharp stones that they use for all kinds of surgery; and none but African women could bear the barbarous methods of dealing with abnormal childbirth. I suppose it is because of the hard lives these people lead, and their want of sensibility, that they tolerate such things.

Nature's readiness to yield an easy living, and the greed and tyranny of his stronger neighbour, have combined to make the African the improvident creature he is. Even in the house, he rarely stores food for future needs, dreading its seizure:

nor is he ever properly provisioned for a long journey; yet the African is often cheerful when fate or his improvidence have brought him misfortune. When he does meet plenty, he takes the gift with childlike joy. The happiest negro is he who has ten pounds of meat before him, and the saddest he who, having over-eaten, is too ill to eat more next day.

The white leader of an expedition may have to tighten his belt in days of privation and disaster; but he can face these with the fortitude which comes from the hope of better times ahead, and the resolution which is his birthright. The native carrier, in similar circumstances, has no such advantages. The future and the road ahead are alike unknown and dreaded, yet his cheerfulness sometimes equals his master's resolution, and his physical endurance the white man's fortitude.

More often, unfortunately, the African's inherent laziness conquers his virtues; and then all the energy of the white man is needed to overcome the carrier's dislike of marching early before the sun has warmed him, and his desire to rest before it is too hot. He can show the utmost craftiness in creating obstacles to any advance, and will tell any lie to gain an interval of rest. If there is little water or game in the country passed through, he is sure there will be none at all ahead: if the tribes have been difficult in the rearward marches, he is certain there will be worse men in front.

The African lie is artless, readily detected, but not purposeless. A native will often give an answer which he thinks will please, or one which suits his purpose; or he may simply dissemble to gain time and a knowledge of his visitor. For instance, if asked if game is in the neighbourhood, he will answer yes if he thinks this will please you, or keep you in the village for his profit; or he will answer no, or give a wrong direction for the game, if he wants to get rid of you; while most frequently of all, he will look stupid and pretend not to understand, in order to gain time, and find out more about you.

The African's untruthfulness is equalled by his lack of sentiment.

Of love and affection, such as we understand them, there is little. A mother gives her child its food and is not unkind to it; but in many years in Africa I have never seen open affection between man and wife, and rarely a mother play with her children. The people are below the animal, if affection is a standard of mental development; and that the negro lacks the finer qualities is shown in his utter lack of jealousy and self-respect with regard to his women.

Though rarely deliberately cruel unless roused by superstition or anger, the negro is absolutely heartless; he will ill-treat domestic animals and will even be amused by their suffering. I have seen natives amusing themselves by throwing their axes at the head of a dying buck, and laughing when the poor beast tried to ward off the missiles with its horns. They were utterly astonished when I beat them in my horror and anger. Bruce's story of the banquet of a century ago in Abyssinia, when the meat was cut from the living ox, was probably true, as was the statement that a steak would be cut from an ox, the skin stitched over the wound, and the animal driven on for another's day's dinner.

This want of feeling for animals is possibly due to the negro's own extraordinary insensibility to pain. I have seen a man who had badly injured one hand in an accident, trying to cut off a portion of the injured member amid the jeers of his mates, and hurrying off soon after to grab a share of the meat of a buck which had just been carried into camp.

This insensibility to pain may make the negro unsympathetic to others, yet these very carriers who had laughed at the injured man would have shared their last meal with him. On occasions when ill myself I have found both kindness and neglect from my men; once when very ill on a long journey I was much neglected and nearly died in consequence; on other occasions when less ill I have been carefully looked after. Of course fear and respect are much stronger motives in the black than affection or gratitude, and it is probable that I lost attention in the first instance because I was too weak to enforce it.

It is certainly difficult and hardly fair to judge an African's character from a European standpoint or by such a standard. The nature of this primitive man, brought up in ignorance and fear, is as childlike in its unconscious cruelty as his untruthfulness is transparent and his deceit infantile.

The negro's virtues of honesty as regards property, and fidelity towards his acknowledged master, though they may be the result of centuries of fear, do exist to-day, and contrast not unfavourably with some traits in the character of those who govern him.

The simplicity of character of the negro in the interior when he is away from European influence is reflected in the state of his dress and his habits.

The style of head-dress differed in the various tribes I passed through, the men usually partly shaving their heads while the women nearly always wore elaborate coiffures. In some tribes like the Ba Lundas and those near the Congo, however, the hair of the head and beard is sometimes kept long. Many of the native women in Angola fashion their hair in short plaits, which hang down all round their head, the plaits being ornamented with beads or small shells, while strings of shells or beads are worn as a band round the forehead. Sometimes the plaits of hair are brought together into a bunch at the top of the head.

In some tribes the hair is partly shaved, tufts of wool being left which may be ornamented with beads, shells, or feathers. In the Quimbandé tribe, the hair is done up in the fashion of a fireman's helmet.

As might be expected, the women's heads, which are never washed, but only oiled or stiffened with clay, become the happy hunting-ground of a numerous fauna. One of a mother's daily duties is a hunt in her children's heads, and the adults help each other in this pastime. There are professional louse hunters paid at so much a head; and I have seen ingenious traps for lice, worn on the head, not unlike a gardener's trap for earwigs.

It is the fashion in some parts of Angola to produce flat and pendulous breasts by tying a band round the upper part. With these long breasts the mother can, whilst walking, suckle the baby carried on her back.

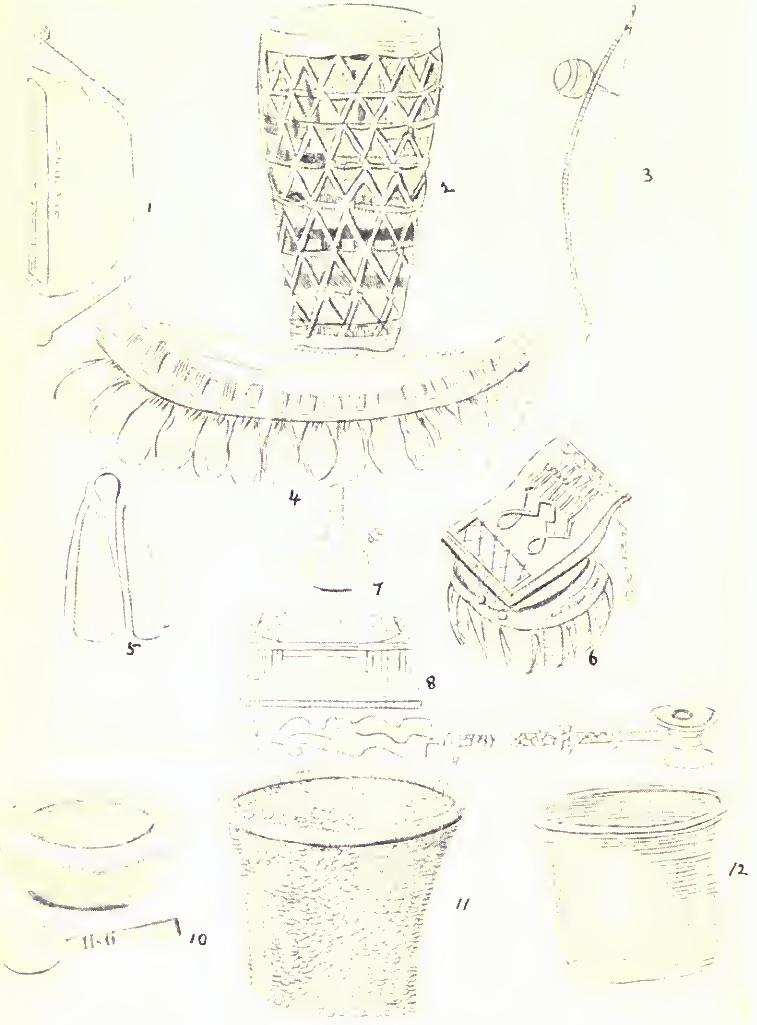
The scantiness of clothing and bedding all conduce to want of cleanliness in the person of the Angolan native, as he considers that bathing opens the pores of his skin and is thus harmful, while by greasing his body he renders it less liable to cold.

The African, even when cleanly in his habits, has a strong and peculiar odour, due to special sebaceous glands under his armpits. This scent, which a witty Frenchman once called "Bouquet d'Afrique," is so powerful that I have been able to tell when my negro servants had been in my tent; and on a still day and in thick grass the scent of the carriers has overpowered me when following a path among them. Animals unused to it, such as European dogs, dislike the negro's odour unmistakably; but it is stated with some conviction that wild animals can scent a white man much farther than a black, and the blacks say the white man smells badly to them.

The tribes of the uplands, like the Bailundos and Bihés living in a colder climate, scarcely wear more clothes than those who live near the Congo or the coast; but their dress is warmer, as it usually consists of skins. The Mushicongos, Musollos, and Loandas of the coast wear, if men, a loin-cloth; if women, two pieces of cloth sewn together which they wind round the body and waist, the upper end being tucked over the breasts. In the remoter and poorer villages both men and women wear just two small mats or skins suspended one in front and the other behind the loins. Completely naked tribes were never met with. Of course "civilization" and the influence of the European have greatly altered the dress of the native, and not always for the better; as any one can realize who sees a native woman decked out in ridiculous white stockings and high-heeled shoes.

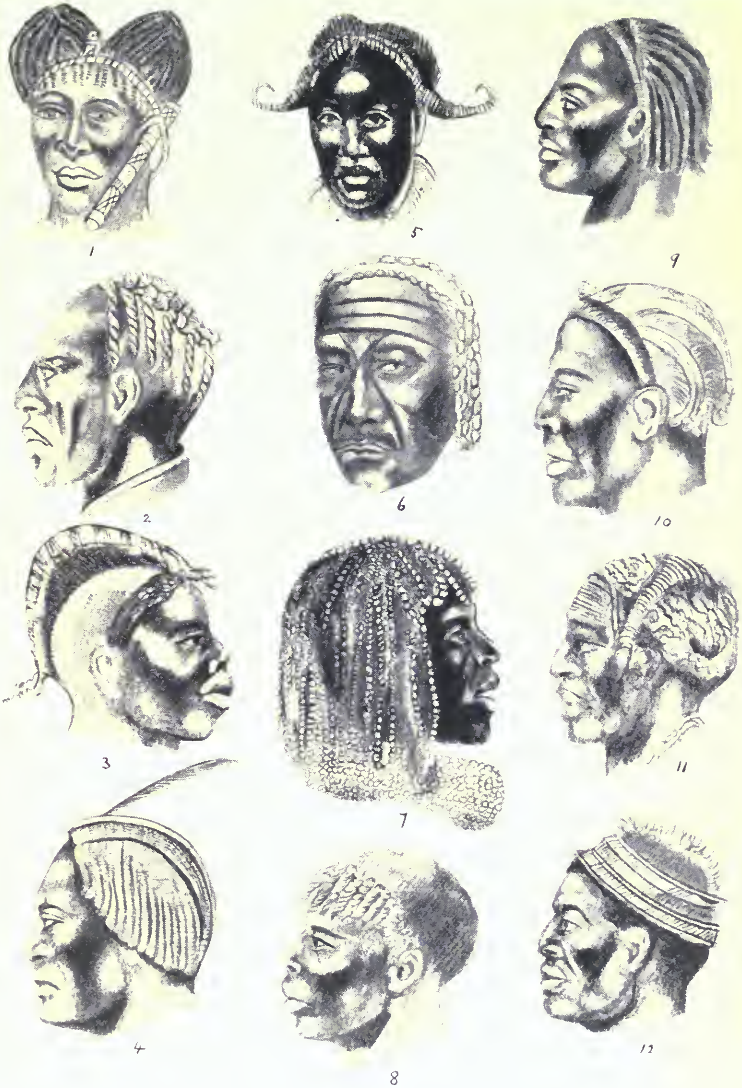
The hut architecture in most parts of Angola is poor, a round hut of poles and mud surmounted by a conical sloping roof of thatch. In the Congo province the huts are better built and square. Some huts are simply formed of sloping boughs covered with leaves or grass, and the shelters of the more nomadic tribes of the south, changed from day to day, are more primitive still. The houses of the river island dwellers are raised on piles often several feet high. Most of the older villages are surrounded with palisades, a relic of former intertribal raids or a protection against wild animals.

When Europeans or natives come in contact with negro Kings or big Chiefs there is a good deal of ceremony used in mutual salutations; but since the Portuguese have broken the power of the Angolan Chiefs, and now that one only meets head-men of villages or very petty Chiefs, much



MUSICAL INSTRUMENTS AND HOUSEHOLD UTENSILS OF ANGOLAN NATIVES

1 to 6 are Musical Instruments: 1, Signalling Drum. 2, Music Drum. 3, Bow and Sounding Gourd. 4, Marimba. 5, Musical Bell, "Engongui." 6, Quissange (sansa). 7. Pipe for smoking "diamba" or hemp. 8, Wooden Pillow. 9, Tobacco Pipe. 10 and 12, Wooden Bowls and Spoon. 11, Mat Basket.


1
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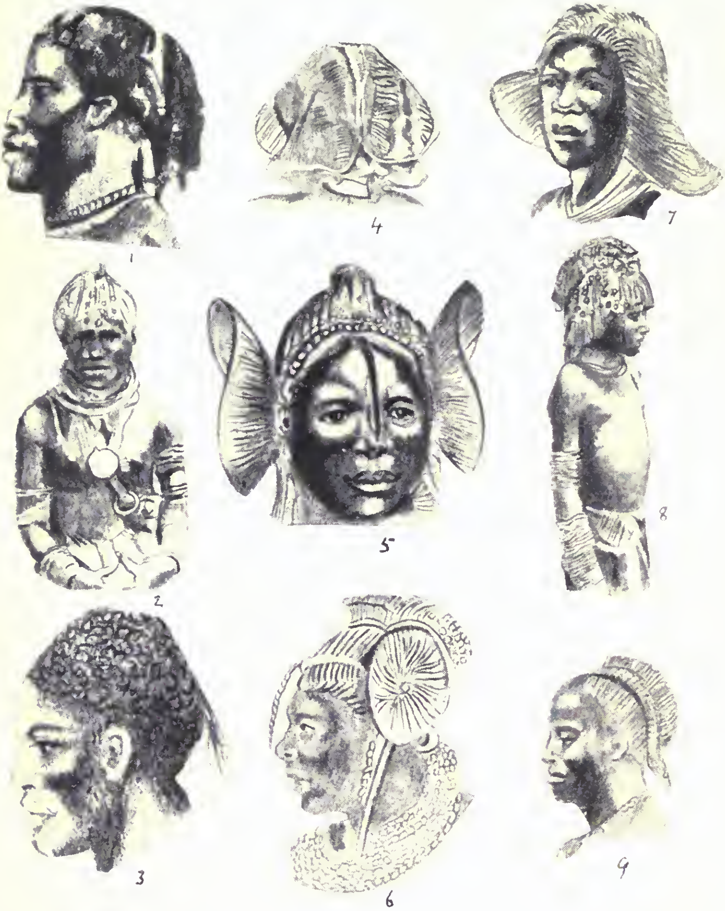
12

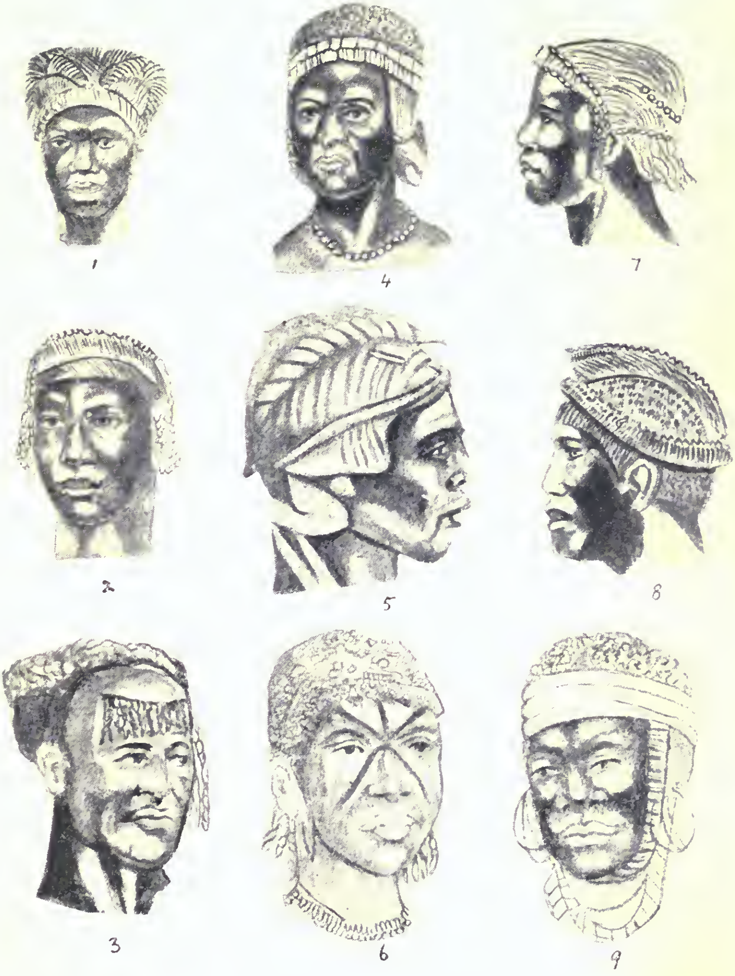
HEAD-DRESS OF ANGOLAN TRIBES

1, Luimbe. 2, Ambuella. 3, Ba Nano. 4 and 12. Quimbandes. 5 and 11, Selles. 6, Luenas. 7, Mondombes. 10, Luchaze.



HEAD-DRESS OF ANGOLAN TRIBES

1, Bandimba. 2 and 8, Children of Gambos district. 3, Ba Coroca.
4, 5, and 6, Women of Humbé. 7, Otokero. 9, Ambuella.



HEAD-DRESS OF ANGOLAN TRIBES

1, 2, and 3, Ganguellas or Kangellas. 4 and 9. Bihé. 5, Bailundu. 6, Luena. 7, Lemba. 8, Quimbande.

of this ceremony of salutation has fallen into disuse. I never met a big Angolan King or Chief in my 1000 miles of wandering on foot through the country; but I understand that when one does, the King and his counsellors dress up in their best and assemble in front of the royal hut or under the tree of audience. Here the King, seated and surrounded by his counsellors (called "macotas") and his people, receives the European, who sits in front of his own servants and opposite the King. The visitors clap their hands, and the King responds by extending his left arm in front of him, and placing the back of the right hand in the palm of the left, the fingers of the former being moved in the direction of the visitor.

If the visitor is a white man, which means that he is the King's equal, both he and the King clap hands; then the King, through one of his counsellors, welcomes the guest to the town, and asks him his wishes. The white man replies through an interpreter, and makes a suitable present. The meeting breaks up after a handshake, and the King then sends the white man a present of food-stuffs.

When natives approach a King or big Chief, they kneel on the ground and rub their foreheads in the dust; or rub their hands in the dust, and place some of it on the forehead.

When the dress of a Chief consists of discarded European clothing, it may be very ludicrous, as when a top hat ornamented with wine labels is worn on the head; or a once brilliant uniform only partly covers the body. Some Chiefs, however, are wise enough to dress in native costumes. Only great Chiefs may use the royal cap made of woven fibre, and the royal wand of office; which is not only the King's mark of kingship at all ceremonials, but is sent by messenger with important messages.

The Kings of the Portuguese Congo still retain the title of King, and the principal noblemen are still Marquesses and Counts, though these titles, granted by the Portuguese three hundred years ago, are not of much importance to-day.

The Portuguese in Angola have a settled policy of destroying native power and authority, and have done away with all except purely nominal native rulers. This policy of disuniting native tribes, and dividing them up into small sections under very minor Chiefs, has apparently resulted in a decrease of native risings. Such small native risings as have occurred in Angola have, in consequence of this policy, been readily suppressed.

The native form of government is patriarchal and communal: the small Chief or Sova rules over a group of villages, or one village, which may even consist of his family and relations alone; the village land is usually held in common.

Most Angolan natives smoke, and the tobacco plant is found near many of their villages. The tobacco is smoked in pipes, some of which are large and wonderfully carved. In the north of Angola snuff-taking is as prevalent as smoking, the snuff being sniffed up from the palm of the hand with deep breaths; for the nose of the negro seems to be as insensitive to vast amounts of snuff as his palate and stomach are to strongly spiced foods and potent drinks.

Another Angolan habit is the smoking of wild hemp (*Cannabis sativa*), called "diamba," which is taken in the same way as a native of India smokes tobacco, in a hookah; a gourd full of water being placed between the pipeful of hemp and mouth of the smoker. The smoke, even thus cleaned, is so strong as to cause every one who has inhaled a few puffs to cough violently and pass on the pipe. The men say that this smoking of hemp makes them feel warm in the early morning, and one cannot but sympathize with the poor natives who come out of their huts on a winter dawn in the Angolan highlands, almost naked, and shivering in the sharp morning air; holding their hands on their shoulders or bringing their elbows together and placing their hands on each side of the head, which is bent down into the chest—their way of showing how cold they feel.

The food of the Angolan natives is dealt with in the chapter on produce as well as in other portions of this book, and only a very brief summary is given here. The mandioc root in various preparations such as fuba (flour), infundi, and pirão (porridge), and various forms of cakes, is possibly the commonest food-stuff in the country, but maize and millet are also largely used, as are yams, ground-nuts, pumpkins, and such fruits as bananas and paw-paws. Meat and fish are eaten by all natives, except those prohibited meats which are taboo to the individual. Beef and milk are rarely used as food, and butter is only employed as an ointment. Almost every living thing is game and food to the native; even such unsavoury animals as crocodiles, lizards, frogs, caterpillars, white ants, and locusts, are eagerly eaten. Field rats and mice are a special delicacy.

A most curious custom in Angola is that of the "lent rat," mentioned by Monteiro when he travelled in Angola over sixty years ago; though I was unable to conform the statement, it is almost certainly true, as Monteiro was a most careful and accurate observer. He states, speaking of the natives in the district of Novo Redondo, that "When a relative or other person visits them, infundi or pirão is prepared, and should there not be a bit of meat or fish in the larder they send to a neighbour for the 'lent rat,' as it is called. This is a field rat roasted on a skewer, and it is presented to the guest, who, holding the skewer in his left hand, dabs bits of the infundi on the rat before he swallows them, as if to give them a flavour, but he is very careful not to eat the rat or even the smallest particle of it, as this would be considered a great crime and offence, and would be severely punished by their laws." Monteiro comments on the unusual nature of such sham politeness and snobbishness among savages.

Of musical instruments in Angola, the most popular is the drum, because it makes the loudest noise, and the African drum, perhaps for that reason, is usually larger than our own. One form of drum, made like a narrow wooden box (see Plate), is used for signalling; there is a definite drum language, and I have managed to have messages sent long distances by means of such drums.

A small instrument, very common in the country and elsewhere in Africa, is called the "chissange" or "quissange" in Angola, and "sansa" in many other parts of Africa. It consists of a flat piece of wood or a flat box, on which are fixed a number of thin slips of iron. One end of these slips is attached to the extremity of the board, while their free ends come half-way down the board, parallel to and half an inch above it. The native plays the quissange by alternately pressing and releasing the thin metal slips, each of which gives a different note, while the group of them form a scale. I have heard this instrument played in many parts of Africa, and though there was never any tune, merely chords and variations of notes, yet on many a night in the wilds, the hard day's hunting over, one has been lulled to sleep by the sweet soft tones of this little African guitar, which is sometimes made even more melodious and resonant by attaching a hollow gourd beneath the keyboard.

There are two other instruments used by the natives, called "marimbas," which are not unlike those which music-hall performers employ. One of these consists of a number of small pieces of wood of various thicknesses and lengths, attached by their ends to two parallel plantain stems. These pieces of wood are beaten alternately by a couple of drumsticks, and the notes being arranged in a sort of scale, music of a kind is produced.

Another instrument is somewhat similar, but the parallel pieces of wood are curved, and below them are placed a number of hollow gourds increasing in size from one end of the instrument to the other, as the size of the gourd influences the depth of the note, and even a better scale of notes can be produced on this instrument than the other.

There is a curious and ancient musical instrument, possibly peculiar to Angola, which is used more for signalling than making tunes. It is called the " engongui " by the natives, and is still in use, though described and illustrated by Cavazzi in his 250 years old history of Angola. The engongui consists of two bells like long cattle bells, lying parallel and attached to each other by an iron or bronze bar. It can only be possessed by a big Chief, and was carried in the old days by slave caravans to announce their arrival, and any news of war and peace along the road.

A musical instrument which could not be used in polite society is one in which a small gourd is attached to a bow. The rim of the gourd is held on the player's stomach while he strikes the string with the thumb and fingers of the free hand. " Little Mary " acts as a resounding-board, and the depth of the note depends on the portliness of her owner.

The only kind of dance which I saw myself in Angola, like most African dances, was neither a chaste nor artistic movement. During one of the drinking bouts a ring of spectators was formed, drums and marimbas were brought into the circle, and vigorously thumped and twanged; torches were lit, and the dancers, a man and woman, ran into the ring and danced, while the spectators clapped their hands in rhythm with the music. The couple danced a sort of step dance, crossing each other constantly, or advancing or retreating till they suddenly collided, stopped, and then gave way to the other dancers; and so the merry round went on till dawn.

A dance described by Monteiro in the north of Angola is called the "batuco," when, amid the familiar surroundings of the ring of clapping people and musicians, the dancers, both men and women, jump into the ring and perform a swaying dance like the Indian nautch, but more vigorous and less decent and graceful.

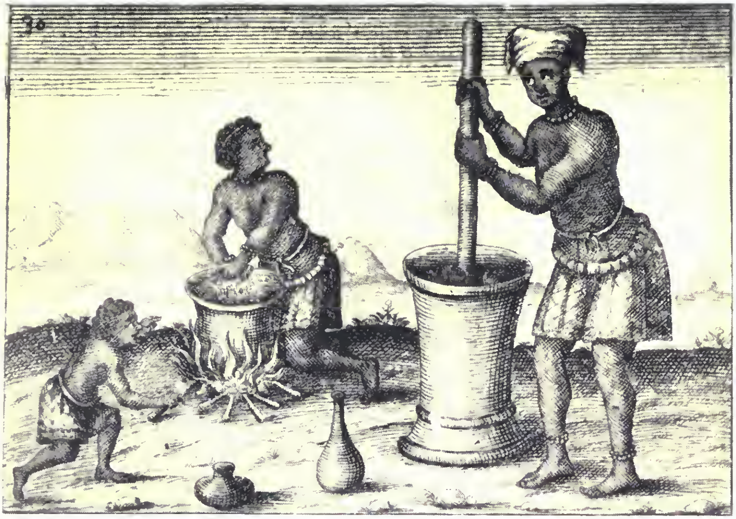
The circumcision rites, which seem to be similar to those I have come across in other parts of Africa, take place at intervals when enough boys and girls have been collected from neighbouring villages for the purpose. In Angola the ceremonies take place in June and July. Both the boys, who apparently are dealt with some time before puberty, and the girls, who are dealt with before marriage, are secluded in separate places in the forests near the villages. Here they are operated on surgically, and instructed in marital, and, in the case of girls, household duties as well. During the period they are isolated, the initiates dust themselves over with chalky earth and ashes and paint fancy patterns on their bodies. No one is allowed to approach near the initiation huts, and the boys will unmercifully beat any one they even meet on the road. On one occasion two of my men were chased by an initiation gang, and only saved themselves by running to me for protection.

The girls are not marriageable until they have passed through their initiation ceremonies. I was not able to ascertain whether some of the nude, ash-dusted young women I saw in my journey through southern Angola were initiates or brides about to marry; for I know south of the Cunene River all brides are taken round to their friends and painted up like this, and enjoy a large measure of freedom before marriage.

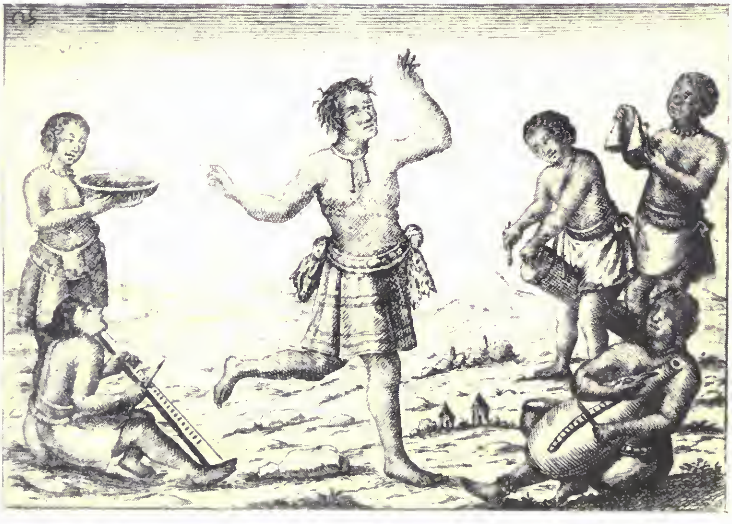
The custom of keeping brides separated from the ground occurs here as in other parts of Africa, where the custom may equally apply to other people temporarily rendered important, such as girls during initiation, dancers, etc.

Scarcely anywhere in Angola is there any ceremony on marriage, which is practically always a matter of purchase, the women being bought with cattle, merchandise, or money. She brings neither dowry or trousseau beyond an apron of fibre skin or cloth; in some tribes the bride is handed over naked to her husband, who must provide her with all her clothing, a sleeping mat, and the few pots and pans, which is all the furniture there is in an Angolan household. He has also to provide the wedding feast and as much beer and palm wine as the village can drink.

In the south of Angola among the manlier hunting tribes, a prospective bridegroom must qualify himself for matrimony by running down

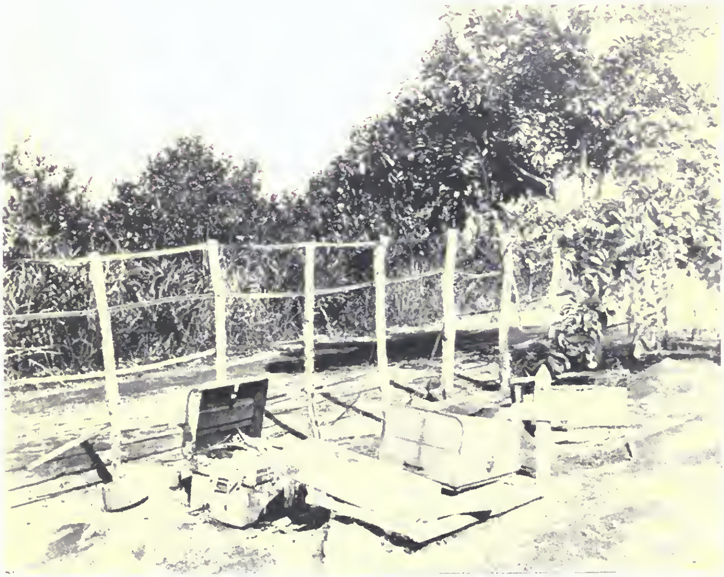


GRINDING CORN AND PREPARING "INFUNDI"
(After Cavazzi, 1687)



MUSICAL INSTRUMENTS
(After Cavazzi, 1687)

A TREE OF SACRIFICE, WHERE SLAVE VICTIMS WERE TIED AND EATEN ALIVE BY ANTS TO CELEBRATE A TREATY OR A FEAST



GRAVE OF RICH NATIVE, WITH THOSE OF HIS BELONGINGS NEEDED IN THE OTHER WORLD and spearing a giraffe or antelope, but I never came across any similar custom in the part of Angola traversed in 1920.

The African woman is spared the pain and discomfort in childbirth which so affects her white sister, for in Angola, as elsewhere among primitive peoples, the expectant mother who has gone out to work will sometimes return not only with her baby but with her basketful of produce as well.

In some tribes, expectant mothers leave their husbands three or four weeks before their confinement and live in a separate hut; and in others a wife may not return to her husband till the baby has been weaned. This is one of the causes of polygamy, or an excuse for it, if such was ever required by an African.

Some years ago in Angola, elderly people when infirm and useless were quietly put out of the way to save the trouble of a long final illness. This does not happen now, but I did not find much sentiment or ceremony expended on the very old, especially if they were women.

The dead are disposed of in various ways. Some of the south coastal tribes simply throw the bodies into the bush; others lay them in any convenient hole, often doubled up (Bandombes, Ba Cuandos, Quillenges), and even break the limbs to effect this (Humbés); though most tribes bury their dead horizontally.

There is no common burial-ground in Angola, the dead being often buried under the floors of the houses. If buried in the open, the grave is sometimes near a pathway, and one can tell who is buried in it from a basket or pot being placed over a woman's grave, a staff over that of a man, while the skulls of the animals he had killed adorn the grave of the hunter.

When a Chief dies there is considerable ceremony, much dancing or feasting, strangly mingled with weeping, which goes on for days, while the corpse is prepared for burial. Among some tribes the body of a big Chief is smoke-dried over a slow fire until it is mummified, then placed in a large jar or coffin, or merely wrapped in cloth or skin before being buried under the floor of the hut. In other cases it is placed sitting in the hut till decomposition sets in, and then buried.

Some years ago, when hunting towards the bend of the River Niger, I came across several subterranean mausoleums, from which radiated passages in which had once been placed the bodies of slaves murdered to form company for their Chief, and food as provision for his future. I understood from the natives that the older burial-places of the Angola Chiefs conform to the same idea, and probably these tombs had room for the slaves who died with them.

Frequently the village where a Chief dies is abandoned by his successor. I came across several villages, especially in the country near the Coanza, where a village well laid out on a good site had been abandoned for this reason. This is one of the causes of the constant translations of villages, which make map-making and map-reading so hopeless in Angola.

A custom met with in some tribes is the putting out of all fires on the death of a Chief; all new fires have then to be lighted by friction ignition, effected by rubbing and twirling one dry stick in a hole made in another, easily inflammable tinder or grass being held in readiness to start a fire from the sparks which the friction produces. A few years ago, in certain tribes a Chief could not succeed another until he had actually eaten a portion of his dead relative, or a slave killed for the purpose.

In most tribes, succession of chiefships passes by the distaff side and to nephew or niece, as they think it more certain that the sister of the King is a daughter of the King's mother than that the king's child is his own. But probably it is the ancient custom of mother-right which rules in the country, and not any frailty of the kinder sex which determines the procedure.

CHAPTER XVI

NATIVE HUNTERS AND THEIR WAYS—GAME AREAS AND THE WAY THERE

IT takes a man a long time to know the jungle and jungle ways, but a much shorter time to forget what he has learned. Early training and a keen desire made me a hunter, but a studious life has destroyed much of the craft built up since childhood, some of which must perforce be learned again on every trip.

To go back to the forest and find how slow the eye has become to see the track or sign of a passing beast; to trust to compass, watch, and gun-boy, where sun and stars or landmarks should guide one back to camp; to rely on others doing what had been a joy to do oneself, is to know that town and book have done their work and spoiled some precious sense which Nature taught. Keen sight and observation, quick resolve and action, have all been dulled again by life in cities and laborious thought and work, and it will take days of a man's life in the forest to become once more the hunter.

To the fortunate person who is to know the joy of the hunter's life for the first time, the help of the native of the country will be needed for a time—needed to take the white man to the game.

bring him back to camp, and guide him in forest ways and law, till he can guide himself. Then take your gun-boy or guide, and deal with him kindly; in most things he is a good fellow, whether he comes from the East or West, South or Central Africa. A cheerful liar, mostly faithful, and quite a man to deal with, if it is a man he serves. He is much what you make him, and sometimes better than his master, though often naked and unarmed. Amongst his simple lies, and fantasies of spooks and devils, you will learn much on jungle law, and the ways and tales of jungle beasts, traps and trapping, and much else.

He will show you the fetish obtained from the witch doctor, which ensures success in hunting; perhaps the little horn of an antelope filled with magic things, which he will rub on his spear or arrow, or old tower musket. Then he may take you to a famous hunter's grave, covered over with the dead man's trophies, where he comes sometimes to make an offering to the hunter's spirit for luck in hunting, and then, taking earth from the ground, rubs his gun or spear to give it power. If near some wanted elephant, your man may even stop at some fetish tree to make a sacrifice, and ask the spirit of the forest to help you both to kill the tusker.

When the native knows you better, he may take you to see the pit in which he catches game, dug in the only path left open to his garden, and so craftily covered over that even the wary buck may not see it; or to the side of a river or pool and show you the snares he has set for the birds that come to water; or other traps, with schemes of snares, or falling logs arranged upon the game paths. If the grass is dry, you may see how villagers will form a ring of fire to drive the smaller beasts into the nets, or on to spears and arrows.

Later, when your guide has come to trust and like you, and speaks more fully still, he will tell of greater pits dug in days gone by, to capture herds of driven beasts, when the land was full of them, and of traps of great upright posts at either side, and a cross-post upon them, from which hung a broad log-hafted spear, so set on paths as to fall upon the neck or back of the elephant or hippo which walked along them. This gave deep wounds, still further torn when the haft struck the trees under which the terrified beast kept running until he died. He might tell of other days when hippos were hunted in the water from canoes, with harpoon-like spears, and floats of ambatch wood which showed where the wounded beast was swimming.

When he has finished boasting of all this hunting, he may tell you, with a grimace, how one leg of any beast he kills goes to his Chief, and another to the village. If you are passing by a river, and see a dam across it, with an opening where a cone-shaped trap is fixed to lie in the water, your guide will show you how it serves to catch the fishes which can pass down the narrowing trap, but not out of it; and when he talks of fishing you will hear how fish are speared or choked by mud stirred up by paddling feet, or poisoned with the herbs which every village uses.

It will have to be the guide who does the talking; if asked leading questions, he answers what he thinks will please you, or lies till he is certain what you want, and between one and the other you will learn little of what you wish to know.

I like the savage, and if sometimes angry with him, the anger passes quickly; for you should hear his laugh when telling other boys about your temper, when all will laugh, and soon forget, for they are just children, though sometimes very trying.

Even if you like and trust your gun-boy, carry your own weapon. This gun may have two barrels, or a magazine and one: that you decide yourself. After using every kind of gun and rifle, from a muzzle-loading smooth bore through a chain of Sniders, Martinis, eight and twelve bores, old-fashioned Express rifles, to the latest cordite Magnums, I prefer a small-bored magazine rifle for all-round shooting, and my double five-hundred cordite when expecting trouble.

The tracking of game is carried out by observing the track, droppings of animals, and signs on grass, shrub, and tree, of pressure from their bodies, or marks of feeding.

The tracks illustrated in these pages have been made from actual spoor, over the course of many years' hunting. They show the tracks of animals when standing or walking on soft ground. To spoor well, it is necessary to have hunted much, and these tracings can only give a general idea. The track itself is very rarely as complete and distinct as even these tracings suggest, which are printed faintly upon the type to express difficulty and indistinctness. Only a portion of a track is usually visible, generally the toe points, and then only if the hoof can make an impression on the soil. In the case of carnivora, where the soft pads cannot indent the ground, there may be practically no spoor on hard ground, but only a slight displacement of surface earth.

Spoor of the hind feet of nearly all animals is smaller and less distinctive than that of the fore feet. The droppings of animals can give, like the spoor tracings, but a useful indication and nothing more. These droppings in the case of antelope are generally hard and formed in the dry season, but less so in the rains, or whenever the feed is very moist and green.

The freshness of the dropping can be judged by its warmth if very recent, its moisture, and its freedom from maggots. The position of the droppings, whether in the sun or shade, and the effect of the dew and evaporation, would have, of course, to be considered in judging the age of any spoor.

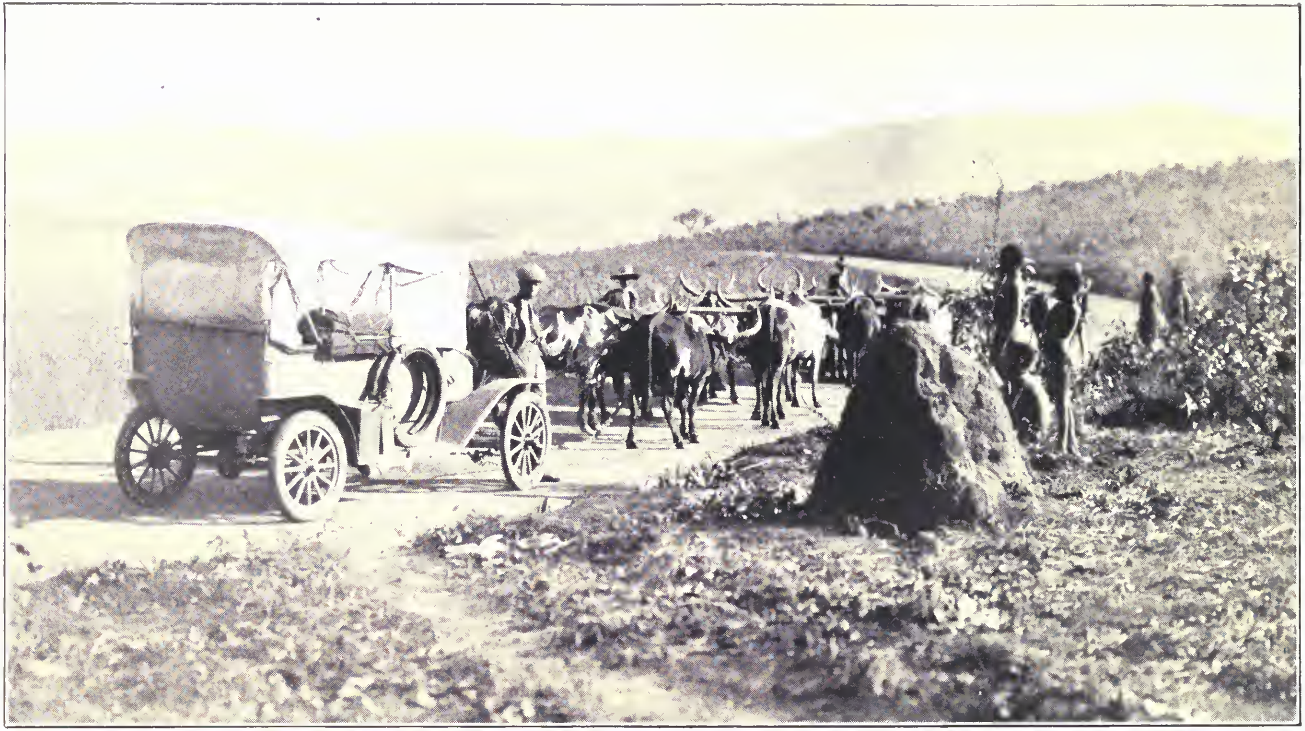
Other signs useful when tracking are those of pressure of animals' bodies on plants, such as crushed or bent grass or stalk, and the age of the track may be judged by the freshness of their bruising or of the earth on them. Marks of teeth, trunk, and horns on leaf and stem show, by the freshness or dryness of the grass, leaves, or branches lying near the track, when the animal has passed.

GUIDE AND GUN-BOY [*See page* 230

TRANSPORT DONKEYS

TREKKING BY WAGON—

—AND BY MOTOR



A CONTRAST IN TRANSPORT METHODS—WAGON TEAM PASSING A MOTOR-CAR

CARRIERS DANCING

—AND RESTING

[*See page* 2.

The degree of alarm of an animal may be judged by the nature of his spoor. If running, a good deal of earth is displaced by the hoofs, which are then more widely splayed, and the marks of the points more deeply cut in the earth.

As regards blood spoor, the amount of blood is no certain indication of the severity of the wound, but only of a blood vessel having been injured. Air bubbles in the blood show that it is coming from the lungs; and blood in the droppings, that there is an abdominal wound, and the intestines are injured. Blood should be looked for on grass and bush as well as on the ground. The nature and severity of a wound may be judged from the position of the blood stains on the grass or ground where he has been moving or lying down.

If your guide is with you, and knows the locality, you will rarely lose your way. The sense of orientation has not been destroyed in the Bushman of the plains, as it has in the white man who has lived in cities, and the native of the hills, neither of whom has had to study direction. The native, however, is not so reliable at night as in the day, and it is wiser then to march by compass or stars.

If you find yourself alone, and think yourself lost, keep your head, march by sun or compass in the direction of your camp, but to that side of it from which you last left it; for thus you may meet your tracks, or recognize ground you have already passed over.

It is better to take your bearings by compass or sun when leaving camp by road, and to note landmarks, the direction of the prevailing wind and its effect on grass or trees, and have a sense of your general direction. Even when stalking or following game, these precautions should be adopted whenever possible. This advice is important, but the novice will probably not adopt it till he has been lost at least once, and has learned by bitter experience the value of observation.

As a help, it may be added that in the Southern Hemisphere the sun points north at midday, the Southern Cross south at night; while in the Northern Hemisphere the reverse occurs as regards the sun, and at night the north is towards the Pole Star.

In the open forests and undulating country of Angola the chances of being lost are small, but if you cannot find your way back to camp by any of these aids, you can signal to your camp by lighting a grass fire, or firing shots at intervals; you may even see your camp by climbing a high tree, and if you are benighted, it is wiser to stay there if in lion country.

If your local man is with you, he should take you hunting from your camp at daybreak, and again in the afternoon. In each case you must travel upwind, if you wish to see game. If you are near a village garden or a forest pool, the guide should take you to look for any tracks at both of these places before he leads you to the forest, for all kinds of beasts come to the garden or water, from the elephant to the little duiker antelopes; and it may be possible to find and follow the fresh spoor of some such wanted animal from near your own camp. When following the spoor, keep to the forest edge, skirting the glades where in the early morning and evening the bigger antelope (eland, sable, roan, and kudu) may be seen. If you are near a bush-fringed river, its banks may be searched for spoor of buffalo, bush buck, and impallah; if the river is open and marshy, you may see water buck or lechwe, and if the sun has not risen, possibly a sitatunga. If the country is open and dry, there may be rhinoceros in the sparse thorn thickets, wildebeeste, hartebeeste, zebra, and reed buck in the open; and if the country is desert, oryx and spring buck. The elephant and buffalo are generally met with only after following their spoor; lion and leopard usually by accident.

In the early mornings or evenings the game will be grazing, and will be easily approached if carefully stalked upwind. In the daytime, when in cover, they are more likely to hear and see your approach before you see them yourself. As long as the game continue grazing or lying down, you may be sure you are undiscovered; if they appear to see you, and you stand still, you will usually be safe; but should the game snort, they are alarmed, and you must shoot quickly or lose your chance. If the game gallop away, they may be found again, if carefully spoored after a small interval.

The senses of sight and hearing in antelopes are acute but not well reasoned: the hunter may be seen and heard, and yet not recognized if he immediately becomes still and silent. The sense of smell is more acute and fully reasoned, for the least scent, from a great distance, may determine flight, unless the animals are in the open plains, where they may recognize danger, but trust to speed and their distance from the hunter to evade it. Game can then be approached by appearing to pass it by, while actually and steadily edging nearer to it.

You may hear the animals before you see them —the rumbling of an elephant's stomach, or the flapping of his ears, the lowing of buffalo and blowing of hippo, the snort of the rhino and larger antelope, the grunt of lion or leopard, and the bark of the kudu and bush buck ; you may actually smell them if they are close, or have recently passed by.

Always be silent of body and voice, observe carefully and obtain the largest possible view by constantly climbing ant-hills or trees, or getting your guide to do so.

Stalk with infinite care, and when you have come up with the animal, shoot to kill, for it is, at the very least, the beast's due that he should suffer as little as possible for your sport. The shot behind the shoulder is the most usual, and the safest with practically all big-game animals ; for if you miss the heart, your bullet may smash shoulder or lungs, and cripple the animal. The brain shot, if you are sure of it, should be reserved for elephant or rhino when broadside on, and buffalo or lion when charging, and within a few feet of you. The first shot is the most important one, as it causes a shock which no others will bring about. Fire a second shot or third, if necessary, without moving from your concealment; for if the animal has not discovered you, and you have missed, he will probably stand still; if hit, move slowly away; if on the ground, may still be alive. If you or your guide rush out and betray your position, the wounded animal will rush away and perhaps escape, or charge unexpectedly.

Very many years ago I commenced to write a book on hunting; in one of the chapters was a number of hunting axioms, which applied to game law over many parts of the world. A few are given here, for sometimes a short phrase will stay in the memory when a longer one cannot, and it is useful for the young hunter to remember—

No rifle is cheap which fails you when needed, or heavy if light at the end of the day.
Keep your gun clean, and always with you.
Let your cartridge be as cool as yourself, for a hot cartridge means a high bullet.
In the jungle to move is to be seen.
More golden than in the city is silence in the jungle.
Never look over cover if you can see round it.
A small hoof may carry a big head.
A good head is worth a careful crawl.
No one should work for the trophy harder than the hunter himself.

Better a fair head gained with credit than a record killed by chance.
No trophy is worth a beater's life.
Never risk a native where you would not risk yourself.
The road is ever long to the laden carrier.
Though the buffalo's spoor leads forward, he may yet be behind you.
No man knows what the rhino will do, nor does the rhino.
A rhino snorts oftener than he charges, and charges oftener than he tosses.
The degree of blood on the spoor is no guide to the depth of the wound.
Treat no dangerous animal as dead, till killed twice over, and then approach him as if still alive.
A vulture on a tree may mean a lion or leopard beneath it.
Though the mane of the lion tempt you, kill the lioness first, or beware her.
A miss to the head may fail altogether, a miss to the heart smash lungs or shoulder.
A brain shot, which cannot be made when a rhino or elephant charges, alone will stop the rush of lion or buffalo.

There are four ways of travelling in Angola: by railway, motor-car, wagon, or with carriers. The train will take you in the north from Luanda to Melanje, and along this line there is excellent shooting, especially in the country round Casualolla, or in that called N'dala N'tando, where bush cow, eland, roan, water buck, kudu, reed buck, impallah, sitatunga, hippopotamus, and even an occasional elephant may be found. Along the Central Railway, a similar fauna is met in the lower plateaux near the Cubal and Catumbella Rivers, except that buffalo takes the place of the bush cow, and a few wildebeeste may be seen. In the hinterland, between these two railways, lies the country of the giant sable, the Luando-Coanza watershed, and in this country and along the great rivers to the south-east the "songwe" or Angolan lechwe is found.

Along the southern railway line, a day's march south of Mossamedes, there are oryx. The country between this line and the River Cunene, which forms the boundary to the south, between its terminus in the Chella Mountains and the eastern and south-eastern borders of the province, is the best hunting-ground in Angola.

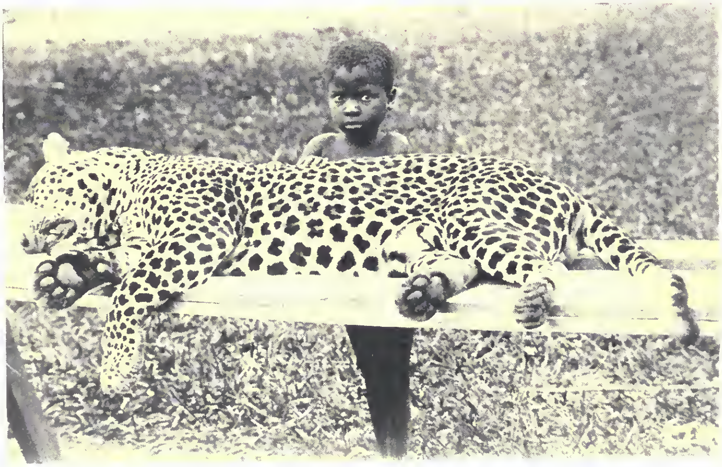
In this great tract of country, where areas of scrub and desert near the coast and to the south are succeeded by the high plateaux of the Chella Mountains sloping south-eastward to the great river valleys of the Cunene, Cubango, and Cuando, most varieties of big game can still be found. Oryx, in the desert near the coast, would be most easily obtained by a motor trip from Mossamedes. A hunting trip in the south-east of Angola should obtain rhinoceros, giraffe, and kudu in the scrub; elephant, buffalo, water buck, cob, and sitatunga near the great rivers, and wildebeeste, hartebeeste, eland, roan, reed buck, and zebra in the plains which border them. It could be made by moto from Lubango as far as Capilongo on the Cunene, and possibly to Cassinga, and from here by carrier or by wagon the whole way. Arrived at either of the three rail-heads, the hunter must decide whether he will travel by motor-car, ox wagon, pack transport, porters, or by any combination of them. The motor-car is an increasingly alluring possibility, with the opening up of roads in the colony, and has many advantages over wagon and pack transport.

Motor hunting trips could be carried out from several points on the Central Angolan Railway, which is better served by connecting motor roads than either of the others, and from rail-head or Lubango on the southern railway, but with difficulty from the northern line. A box Ford car with trailer attachment would be an effective means of transport. A box Ford can carry half a ton, and the trailer a similar amount, and between them could accommodate the hunter, mechanic, and cook, spare tyres, petrol for 2000 miles, a light tent. and equipment for a month's shoot. The lightening of the load by consumption of petrol and provisions, would make possible the transport of a reasonable amount of hunting trophies when returning. The scheme has its difficulties, but could be carried out if enough spare tyres and petrol were brought from England.

When good hunting country is reached, a small camp could be formed near a village, a local guide and a few carriers engaged, and the surrounding country hunted for a few days, before motoring on to other ground. Between the hunt-

A HERD OF SABLE—SOME LYING DOWN

A REED BUCK [*See page* 265



A MAN-EATING LEOPARD [*See page* 271

ing obtained on the road itself and at the frequent camps, a great deal of country could be searched under pleasant conditions.

Most of the game animals, except elephant, buffalo, bush cow, and the giant sable, would probably be met near the less-frequented roads.

The giant sable, that prize of all Angolan game, cannot be reached directly by railway and car from the south, but only after two days' marching from the nearest motor-road points, which are Gamba to the west of it, and Coanza post to its south. From either of these posts, the journey would have to be continued by wagon or carrier transport.

If the sable hunter enters Angola by Loanda, and travels along the north railway to Melanje, he might use the road now under construction, from Melanje south-westward to Mossolo and then southward to the post of Chimbango in the Luando-Coanza watershed country. This road may later be continued south to the Coanza post, to meet the motor road which runs from there westwards to Bihé and the Central Angolan Railway; but its construction is so uncertain that careful inquiry should be made at Loanda before attempting a motor journey to the sable country from Melanje and the north, which was impracticable in 1920. An approach from the south, by train to rail-head and motor through Bihé to either Gamba or Coanza post, is by good roads, and easily made, and from these posts the expedition could be continued by carriers collected at them in advance, by arrangement with their Commandants.

The second method of travelling and hunting in Angola is to use a wagon drawn by oxen, for horses and mules are difficult to obtain, and too liable to horse sickness to be safely used in the hunting country. Wagons can only be used in the plateaux of the centre and south, and not near the tsetse-fly belts, which border portions of some of the rivers like the Coanza, Cubal, Catumbella, and possibly the Cunene, Cubango, and Coando.

In spite of the danger of fly disease, wagon transport could be used to approach the hunting country, and form main camps outside the fly belts; pack transport by donkeys, which are immune to horse sickness and very resistant to fly; or carriers being employed to form flying camps in the fly-infested hunting-ground itself.

As the wagon with eight span of oxen can carry 6000 lb., this method of transport can be made luxurious. Servants may be taken, tents, beds, and other furniture and crockery carried to the hunting-ground, and large numbers of trophies brought back from it. Wagon transport is slow, but eight hours travelling, at the rate of 2 miles an hour, can be done in a day and night. A greater disadvantage is the liability to the loss of one's oxen by disease, or lions; and if disaster to the expedition is to be avoided, spare oxen, pack donkeys, or carriers should accompany it.

A wagon and span, in 1920, could be bought for £400, or hired with personnel, for £40 a month. It is, however, not always possible to hire or buy a wagon and team, for these are at present entirely in the hands of the Boer farmer, and no shooting agent who might arrange transport has yet started operations in Angola. The most likely place to hire a wagon would be at Bihé or Huambo, and the most likely person to give information on this subject, the Director of the Central Angolan Railway (Benguella-Katanga Railway), who resides either at Huambo or Lobito Bay.

The last form of transport to be mentioned, though the most employed, and probably the best, if the expedition be small, is that by carriers. The advantages of carriers are their mobility, carrying power (50 lb. a man), relative immunity from disease, and ability to go away from roads through jungles, over swamps, and into fly country. A further advantage is their cheapness, the carrier and his food costing less than 1s. a day and the twenty-five carriers of a small expedition about £30 a month. The disadvantage of carrier transport is the uncertain temperament of the carrier, who may bring the expedition into difficulties by deserting when most needed, and that of food, which cannot be provided, as with oxen and donkeys, from the jungle itself. The danger of desertion can be overcome by treating the carriers kindly, but firmly; recognizing that the African is very much a child, and to be judged by that standard. If a carrier recognizes that in his white employer he has a master, if a kindly one; if he knows that this kindness is not based on weakness or any sense of equality; and if he recognizes that his employer, through knowledge of the country and of the native, is not going to be bluffed, then the carrier will work well, and the expedition will be a success.

Whatever happens, the white man should keep his word, even if it is to his own detriment, and his temper and good humour, however exasperating the difficulties which have been created for him, or how firm his reserve to overcome them. There are certain tribes of natives, of course, that are worse than others, and there are really bad natives who will induce others to be bad, or to desert, and in spite of all his knowledge and tact, the hunter may be deserted; but much can be done with a knowledge of the black and of human nature. I have more than once saved a mutiny with a joke or a couple of shillings' worth of beer, when the men's temper was doubtful, marches long, and the country ahead unknown.

CHAPTER XVII

THE WILD ANIMALS AND THEIR DISTRIBUTION

IN a country like Angola, of great uninhabited spaces, the domestic animals are necessarily very limited in number and subordinate in zoological importance to wild life and the insect world. Stock is dealt with in the chapter on farming, and insects in the chapter following this; which deals mainly with the larger wild animals, whose description and distribution is given briefly, along with their Latin and native names. The Portuguese names are added where they are distinctive, though few names are given to wild African animals by the Portuguese, who take little interest in them, and call most antelope "cabras" or goats, just as many untravelled English people speak of them as "deer."

The account of the game distribution is, I am aware, imperfect. It has been worked out from my own records, local information, and the narratives of Cavazzi, Livingstone, Cameron, Capello and Ivens, Serpa Pinto, Carvalho, and João de Almeida. The description of game animals and their distribution was so inaccurate in most of these books that every effort was made to correct it by information from Boers, Portuguese, English, and natives in the country. The Boers I met, who knew everything about the game, said nothing; the Portuguese, who knew nothing, often said too much, and thus gave me wrong information; the natives answered what they thought would please; and the knowledge of the two resident English hunters, met on my trip, was very local.

Two game maps of Angola have been prepared and discarded in turn, as likely to become increasingly inaccurate with the rapidly diminishing game population of the country. A useful and approximate geographical distribution of the game can, however, be given within certain degrees of latitude and longitude.

The bush cow is mainly found north of the tenth degree of latitude, buffalo to the south of it; the rhino, zebra, impallah, and spring buck to the south of the fourteenth degree; the giraffe, brown hyæna, and oryx south of the sixteenth, and the latter animal to the west of the fourteenth degree of longitude—a distribution which brings it into the desert triangle in the south-west of Angola. The kudu is found in most parts of Angola, but mainly to the west of the fifteenth degree of longitude, and the Angolan lechwe, wildebeeste, tsessebe, and hartebeeste to the east of it. The giant sable is largely localized in the Loando-Coanza watershed. The following animals are widely distributed, but more numerous in the south than the north: elephant, hippo, wart-hog, eland, bush buck, roan, reed buck, duiker, klipspringer, oribi, water buck, and sitatunga; and the carnivora. The giant hog and the yellow-backed duiker probably occur in certain localities in the north and centre of the country.

The Elephant (*Elephas africanus*) (Onjamba or N'jambe in practically all dialects), at one time plentiful and widely distributed, is becoming very scarce owing to continued destruction, and although temporarily protected, its extermination seems a melancholy certainty.

Elephant come together and form large herds at the beginning of the rainy season, and roam widely, but the dry season distribution of this animal, as far as I can discover it, is as follows: In places along the Congo River and district, and the middle reaches of the Coanza; along the Coporollo River and its tributaries (where I met a herd of 200), between the Cacoluvar and Cunene Rivers; in the valley of the Vibora, a tributary of the lower Cunene; at the source of the River Bero just to the north of this; between the upper reaches of the Cunene and Cubango, near the Colui and Cubangue Rivers; and along the lower reaches of the Cubango and Cuando.

In 1920 elephants were royal game in Angola, and could only be shot on a special permit, or if proved to be destroying crop, or dangerous. The protection of this increasingly rare animal is so desirable, that it should be carefully respected by any sportsman. I regret to say, however, that an American deliberately shot three elephants while I was in Angola, and was fortunate to escape with a fine.

The Angolan elephant, like others of its kind in Africa, feeds during the night, early morning, and late evening, resting during the hotter hours of the day under trees or in patches of elephant grass, and it is usually at this time of day that they are found by the hunter, who has probably followed their spoor since early morning.

Contrary to the usual belief, the elephant occasionally lies down (I have seen this happen on two occasions). The idea that elephants are very short of sight and hearing is possibly due to the fact that they are often approached when dozing at midday, feeding or self-absorbed in other ways, and not on the look out for the sight or sound of a human enemy; and my own experience is, that when expecting danger, or wounded, their sight and hearing are better than generally supposed.

It is fortunate that the elephant's sight is somewhat defective, for with their acute sense of smell, and remarkable intelligence, these animals are dangerous to hunt, and have become exceptionally so since the institution of Game Laws, which, by limiting the hunter in the size and number of his elephants, compels him to approach close to or among a herd, to select his animal. In such circumstances, the hunter may find himself within a few feet of one or more elephants, and have some difficulty in escaping from cows or young bulls, even when the selected bull has been killed.

Should a young hunter find himself surrounded by alarmed elephants, and have killed the bull by a brain shot in that area of the skull which would be represented by a football placed with one end at the ear-hole and the other in the line of the eye; his second shot, if taken at a selected second animal, or made in defence, should preferably be at the elephant's body. The sight of an elephant advancing with ears spread out to 15 feet across, and the pandemonium of sound caused by great rushing bodies and breaking trees, is so unnerving to the inexperienced, that the difficult brain shot, practically impossible except from the side, would probably be missed, and one fired at the shoulder, the root of the spine, or the joint of a limb, be easier and quite effective.

No female elephants, or males with tusks less than 12 lb., may be shot in Angola. These limits, which are too low as regards the male, obtain, however, in all Portuguese, Belgian, and French possessions. Big elephant tusks are rarely obtained in Angola, the largest I heard of weighing 170 lb. the pair. As a general rule, a big elephant carries good tusks, and the size of the spoor (the circumference of which is a little less than half the elephant's height of 10 to 11 feet at the shoulder) is a useful guide if an elephant's track should be followed. A spoor which measures over 19 inches in diameter would be considered as big, and anything below 15 inches usually not worth following.

The HIPPOPOTAMUS (*Hippopotamus amphibius*) (Ongeve in Umbundu and Quillenge, Nguvu in Cokue and Luimbe), at one time very numerous throughout Angola, is still widely distributed, though disappearing even more rapidly than the other game, owing to its size and defencelessness.

I saw but few on my trip, though in some of the rivers, especially in the east of Angola, they are still fairly numerous.

The hippo is fond of using certain paths which, on soft ground, acquire a characteristic shape, two deep furrows stamped down by the feet, being separated by a ridge often worn smooth by the friction of the hippo's deep body. These paths lead to tunnels in the undergrowth bordering the river. The hippo feeds at night, and sleeps by day either in the shallows or on grass-covered islands in the stream. When much disturbed, he floats in deep water with just eyes and nose showing above it. Shooting a hippo in the water from a river bank is unsportsmanlike, and should only be attempted if this quaint beast is needed for food. The only sporting way to tackle one, when he has some chance of defending himself, is to stalk him when feeding ashore on a moonlight night, or shoot him in the water from a canoe. A brain shot, to be effective, must be placed low down between the eyes if the animal's head is facing the hunter, and behind the ear if broadside on. A fatal shot causes the animal to sink at once, but the body floats again within a few hours. Normal tusks measure up to 30 inches. When not feeding, the hippo will live on the best of terms with the crocodile, and I have often found them sleeping on the same rock; but when the females have young, they drive away crocodiles, and if they must pass near them, carry the young on their backs.

The WART HOG (*Phacochœrus africanus*) (Onguluve in Umbundu and Cokue) is widely distributed throughout the more open country of Angola, and near the rivers, but is nowhere very numerous. This pig, with big warts and tushes in his head, short legs, and habit of holding his tufted tail vertical, is one of the most grotesque-looking animals in Africa. Their food consists mainly of roots of plants, though I have found grass in their stomachs in the spring-time. I came across the spoor of these animals frequently, but saw them only three or four times during the trip, and lost one chance of a rare photo, when a family of wart hogs, father, mother, and four young, ran right into me before there was time to photograph them. The alarm of the parents was evident and quaintly expressed, and the sight in the mirror of my "Reflex" camera of six piggies running off with their upright tufted tails fluttering like the stern flags of a squadron of ships, made me laugh so heartily that the photo was spoilt from "shake" effect.

The GIANT HOG (*Hylochœrus meinertzhageni*) has the warts and big tushes of the wart hog, but a coat more like a boar's; and exceeds both these pigs in size. The animal is stated by the natives to be present in the wooded ravines of the Bailundo province.

The BUSH PIG or RIVER HOG (*Potamochœrus chœropotamus*) (Combo in Cokue) is widely distributed in forest country, especially near rivers. I saw its spoor near the Loando and Coanza Rivers in the north, on the Coporollo, and once or twice near some of the smaller streams in the forest country between that river and Lubango; but never saw the animal itself.

With a shoulder height of some 26 inches, the bush pig has a coat of reddish brown, the ears are tufted with hair, and the tushes measure 6 to 7 inches.

Nocturnal in its habits and rarely seen, this pig lives by day in the densest bush, where his food of roots and wild fruit is to be found. I have seen them in families of half a dozen or more, and from the large area of ground rooted up at night, it is probable that herds may occasionally contain more than this number.

They have considerable courage, and I was once knocked down by an anxious mother who had come to a wrong conclusion about my admiration of her offspring.

The Buffalo (*Bos caffer*) (Onyani in Umbundu, Onyati in Quillenge, Njandi in Luimbe), as far as I can ascertain, are found only to the south of the Coanza River, and by destruction from rinderpest and the hunter, are becoming everywhere rare. They are found on the Coporollo River and some of its tributaries, and in the adjoining country to the north-east along the upper Cubal and Catumbella Rivers. All but the last few buffalo of the great herds that existed along the Cunene between Capelongo and Humbé have been shot by Boers, and these wary old bulls cannot escape their fate much longer. There are a few on the Cunene, south of Humbé, and on the lower reaches of the Cubango and Cuando Rivers and their tributaries. Either buffalo or bush cow are present between the left bank of the Coanza and the Gongo and Cunhinga tributaries of this stream.

These black and almost hairless, powerful animals may weigh 1200 lb. without measuring more than 5 feet at the shoulder. The massive spreading horns which meet over the forehead in old bulls rarely measure 40 inches across in Angola, though the East African record is 53 inches. Buffaloes like a close, well-watered country, as they drink often, graze at night, and lie up in neighbouring thick covering during the day. Their spoor resembles that of cattle, both track and dung, and the freshness of the latter may be told from the absence of maggots, which can develop in it within twenty-four hours. In disturbed country buffaloes circle on their tracks before lying down for the day ; by this manœuvre they ensure scenting their pursuer, and when alarmed will run down wind till they lose his scent. These tactics can only be defeated by studying the country, guessing the next water the buffaloes will make for, and circling oneself. Stupid and slow normally, they are obstinate when wounded, and their charge is only stopped by death. It is difficult to kill a charging buffalo, as it keeps its nose up and horns flat, thus covering the brain, while the stumpiness of the animal makes it difficult to place a shot below the head and on to the chest. It is only when he is within a few feet that the buffalo, in lowering his head to toss the hunter, momentarily exposes skull and spine to a fatal shot ; and on his action at this moment depends the hunter's life. Though they hunt their enemy with persistence, a buffalo can be dodged by an active man, and I once kept an ant-hill between myself and a determined buffalo till I won. Old and solitary bulls are amazingly cunning, and hard to track, but afford, for this very reason, the best of sport.

The BUSH COW (*Bos caffer nanus*) (Pacassa in Umbundu) is found in the Cabinda, Congo, and North Coanza provinces, and in places to the south of the Coanza River, especially in the west, where it is said to be found as far south as Novo Redondo. The equatorial type of bush cow, which is a miniature rufous buffalo with a smaller upward pointing horn, develops a darker colour and more splayed horns towards central Angola; but I saw none of the intermediate type of head between bush cow and buffalo, which I have met in Senegambia. Bush cow spoor is similar to, but smaller than, that of the buffalo; and the habits and temperament of both animals very alike.

The RHINOCEROS (*Rhinoceros bicornis*) (Ocimanda in Umbundu, Kevukevu or Kaloko in Cokue) is found in the south of the colony in open scrub or savannah forest. It is reported in the country towards the source of the Bero River, in the upper reaches of the Ocingau, and between this river and the Caeoluvar, in the upper course of the Cubango, Colui, and its branches near Dongo, in the Cuchi in the neighbourhood of the post of that name, and in the extreme south-east portion of the colony in the thorny bush along the Cuando and its tributaries.

Keeping by choice to a restricted area, the rhinoceros is a browser, though when eating small ground shrubs he has the appearance of grazing. He feeds at night, drinks at pools rather than rivers, and lies up in light (often thorny) scrub during the day. The spoor is about the size of the hippo's, but has a three-toed impress. The dung, often dropped in the same spot, may be kicked and scattered by the rhino. Poor of sight and hearing, he has a keen sense of smell, and this fact, with his stupidity and uncertain temper, makes him appear to attack people somewhat frequently, though most of his charges are attempts to get away. On one occasion in South-East Africa when a rhinoceros ran over me, I am convinced, from the circumstances, that it was attempting to escape and not to charge. When wounded they will undoubtedly charge, and sometimes in a most determined manner; I have been charged both in the open and in thick bush by these animals.

The brain of the charging rhino is covered by his horn, and even a neck or body shot is only possible if the hunter can get to one side. Fatal shots are those striking him near the ear-hole (for the brain) and low down behind the shoulder (for the heart).

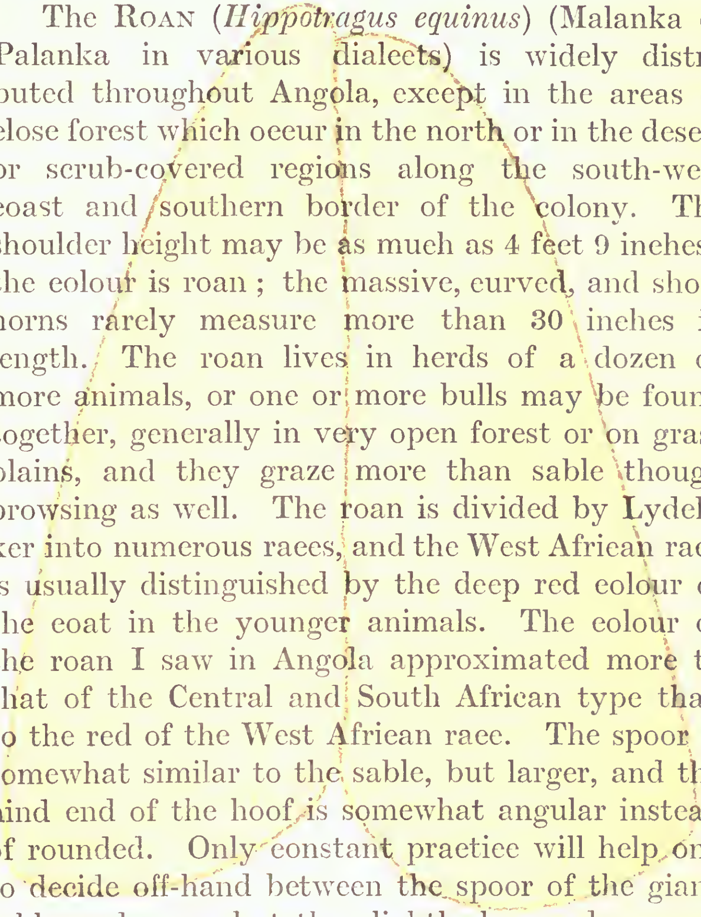
The GIRAFFE (*Giraffa camelopardalis angolensis*) (Onduli of the Umbundu, and Njamba nduli of the Cokue) is found only in the desert scrub or savannah forest of the south of Angola. It has a more reticulated coat than the *G. c. capensis*, with larger chocolate patches on a whitish ground, and changing to small spots on the legs.

The Zebra (*Equus zebra*) (Ongolo of the Umbundu and Quillenge, Ngolo of the Cokue and Luimbe) are found mainly in the south and south-east of the colony and towards the coast. There are two varieties in Angola, Penrice's or Hartman's zebra, in which the pale bands are ochre-coloured, and wider than the dark bands; and Chapman's zebra, where there are many shadow bands and few leg stripes. Both are races of *Equus burchellii.*

My friend Captain Blaine, who shot a few zebra when hunting oryx at Elephant Bay some 60 miles south of Benguella, thought at first that he had discovered a new race, but the handsome skins when brought to England proved on investigation to belong to the race known as Penrice's or Hartman's. The zebra is a grazer, living in herds, often in close community with other animals. The curious and striking colour marks of this animal, so conspicuous in the open, are really protective when mingled with the bands of light and shadow in open forest. The track and dung are characteristic, resembling those of a donkey or horse and not an antelope. That the zebra was once widely distributed in Angola is evident from older histories and descriptions. Its extermination from the north and centre of the colony was probably due to the demand for zebra tails, once the insignia of chiefship amongst many native tribes, and for which precious wares and even slaves were offered in exchange.

The Giant Sable (*Hippotragus niger varianii*) (Kolwah in Songho, Sambakalogo in Luimbe) has its habitat in the watershed of the Loando-Coanza Rivers, though it is possible they may have crossed these rivers—the Loando where it is fordable in the south, and the Coanza at one of its shallower points during the dry season. A Boer informed me that he had seen this animal well to the east of the Loando, but I had reason to suspect the accuracy of this information; and though there were rumours that the giant sable was present to the west of the Coanza, this was not the opinion of any of the natives living within the Loando-Coanza watersheds. The adult bulls measure from 4 feet 6 inches to 4 feet 9 inches at the shoulder, and their body markings are similar to those of the common sable, except that the face stripes are shorter and cream-coloured instead of white. The cows, slightly larger than those of the common sable, have a brighter chestnut coat. The horns of both sexes are much longer and more massive than in *Hippotragus niger*, the records being 63 inches for the male and about 40 inches for the female.

Their food consists mainly of young grass and leaves of the quinsollc bush and chinbimburce plant. They are found in herds of ten to twenty animals, usually containing one big bull and one or more younger males; solitary bulls are frequently met with. The track and dung are similar to those of the common sable, but slightly larger; the hind portion of the hoof is possibly more angular. The front end of the hoofs, rounded and close together in the walking track of the sable, are pointed and spread out in the running spoor.



The Roan (*Hippotragus equinus*) (Malanka or Palanka in various dialects) is widely distributed throughout Angola, except in the areas of close forest which occur in the north or in the desert or scrub-covered regions along the south-west coast and southern border of the colony. The shoulder height may be as much as 4 feet 9 inches; the colour is roan; the massive, curved, and short horns rarely measure more than 30 inches in length. The roan lives in herds of a dozen or more animals, or one or more bulls may be found together, generally in very open forest or on grass plains, and they graze more than sable though browsing as well. The roan is divided by Lydekker into numerous races, and the West African race is usually distinguished by the deep red colour of the coat in the younger animals. The colour of the roan I saw in Angola approximated more to that of the Central and South African type than to the red of the West African race. The spoor is somewhat similar to the sable, but larger, and the hind end of the hoof is somewhat angular instead of rounded. Only constant practice will help one to decide off-hand between the spoor of the giant sable and roan, but the slightly larger dung and track with its angular tracing will help to distinguish between them. Both sable and roan are dangerous to approach when wounded; they have been known to kill hunting dogs and even lions with their sharp horns, and more than one hunter has lost his life through approaching them incautiously when they were wounded.

The ORYX (*Oryx gazella*) (Gallengue of the natives) is found in the coastal zone of scrub and desert country which starts some 50 miles south of Benguella and extends to the southern border of the colony in an ever-widening belt. It is also found near the Chitanda (Coluhi) Cunene junction and other points south of the sixteenth degree of latitude.

The SPRING BUCK (*Antidorcas euchore*) (Gazelle n'latia de Legue of the Portuguese, and Omenye of the natives) is found in most of the scrub country where the oryx is present, and for 50 miles to the north of its area to within a few miles of Benguella ; on the other hand, it is rarely present in the true desert country in the south-west and south of Angola, where the oryx is found.

The ANGOLAN PALLAH (*Æpyceros petersi*) differs from the common pallah (*Æ. melampus*) in having a smaller body (shoulder height, 31 inches) and horns (record, 23¾ inches), and in being marked with three vertical black stripes, one above and below each eye, and the other down the centre of the face. It is found in several Angolan rivers, on the Coporollo, Cunene, Cubango, and probably the Cuando and several others. The pallah, known by its foxy red coat, lyre-shaped horns, and its habit of leaping when in flight, is one of the most attractive animals to watch in Africa. It lives in fairly close brush in herds of ten to thirty or more, and is usually a grazer. Though easy to stalk owing to the covert country in which they live, pallah are among the hardest of animals to bag, owing to their vitality and the readily available cover into which they can escape when wounded. The longest horns I saw in Angola measured 22 inches.

The Blue Wildebeeste or Brindled Gnu (*Connochœtes taurinus*) (Gallengue in Umbundu) is found sparsely along certain reaches of the Cacoluvar, Cunene, Cubango, Cuando, and Cuchi, and possibly in the country between these rivers. I heard that they had previously existed in the lower plateau country of Caconda and in the south of Bailundo, but were rarely seen now.

This curious animal, with his dark brindled coat, black mane and tail, and laterally spreading horns, resembles the small buffalo rather than an antelope, though his grotesque antics when disturbed and excited seem to separate him characteristically from either family. The height of the adult bull is about 4 feet 4 inches, and the weight nearly 500 lb. Wildebeeste are grazers, living in large herds (I saw nearly a thousand together on one occasion in Portuguese East Africa), and prefer open forest country.

Though he possesses a somewhat terrifying appearance, the blue wildebeeste is, I should say, a friendly beast from the way he associates with other animals, and unless continually hunted is far too confiding and stupid to afford good stalking. I take a persistent delight in stalking these animals to photograph them, always living in hope that a bright enough light or a moment of unusual luck may grant me a photograph of the cavorting wildebeeste, though in agility, speed, and grotesqueness of movements his South African brother the white-tailed gnu is immeasurably his superior. The wildebeeste possesses great endurance and vitality, and unless mortally hit will often escape with wounds which should incapacitate any animal.

A Hartebeeste (*Bubalis* spp.) and the Tsessebe (*Damaliscus lunatus*) are found sparsely between the Cunene and Cubango, and possibly elsewhere in south-east Angola, though I never came across them or their spoor. The hartebeeste may be *Bubalis major*, though its known southern limit is north of the Equator. It may be the Cape hartebeeste, whose known northern limit is Lake Ngami, or it may be some other species or a new one.

The Eland (*Taurotragus oryx*) (Onuima in Umbundu, Ongunga in Quillenge), once common all over central and south Angola and now scarce owing to persistent destruction, is still widely distributed. I have seen spoor in the Coanza-Loando watershed, on the Coporollo and north of Lubango, and its presence, though scarce, is reported in the Loanda province, parts of the plateau region of Benguella, Caconda, and Huilla (along the Cunene, Cubango, and Cuando Rivers, and many of their tributaries). Eland are found in small herds or as solitary bulls in open forest, and often near village gardens, which they are fond of raiding at nights. They are able to do without water for long periods, and in waterless tracks of country can live on the wild melon and succulent roots, which they dig up from the ground. This splendid, gentle beast, standing 17 hands at the shoulder and weighing well over half a ton, would be so suitable and valuable for stock that its coming extermination in Angola is deplorable. Its chief enemy at present is the Boer, who destroys large numbers, riding them down and shooting them when they are exhausted—a singularly easy performance, for the pace of the eland being a trot rather than a gallop, he invariably becomes winded and exhausted if kept for over a mile at the faster pace. In the eastern portion of the colony, the Livingstone or striped race of the eland is found, but there may be more than one race in Angola. The heavy twisted horn of the eland, surmounting a handsome tufted head, and the massive neck, with its curious dewlap, form unfortunately for the animal an unusually attractive trophy. The track is cattle-like, but smaller, with more splay and sharper toe-points, and the eland's legs being longer than those of cattle, the tracks are much wider apart. The dung is characteristic.

The KUDU (*Strepsiceros capensis*) (Onjili in Umbundu) has a wide but more definite distribution than the eland, being found throughout Angola to the west of the fifteenth degree of longitude, but while present in these parts of north Angola, and even on the Congo, they are probably more numerous in the coast land from Loanda southwards. This antelope, which many consider, owing to the glorious spiral twist of horns, measuring up to 5 feet or more in length, the finest trophy in Africa, has only a peer in the giant sable of Angola. The grey kudu loves the bare grey-brown hills of the Angolan coast which blend so well with the colour of his coat, and lives in herds of six to a dozen animals (sometimes two or more bulls may be seen together), which browse on the bushes and are ever wary and shy, keeping near their cover. The track is remarkably small and neat for so big an animal, and it is particularly true of the kudu that a small track and animal may be associated with a big head. A herd of kudu is difficult to stalk owing to the watchfulness of the females, solitary bulls being easier to approach. The natives of the Coporollo consider that the kudu on that river differs from those near the coast, but I found no evidence to confirm this statement. Wary, shy, and keeping near cover, the kudu is a browser like all bush bucks, and barks like them.

The BUSH BUCK (*Tragelaphus sylvaticus*) (Ongulungu of the Umbundu and the Quillenge) is widely distributed. There are probably two races: *T. s. typicus* in the west and centre, and *T. s. ornatus* in the south-east area. I saw it on the Coporollo River, and know it exists in many other districts of central and southern Angola. The biggest horns measured were 12 inches in length. Like the kudu, a browser of the forest, it lives in pairs, or a male with two females. The West African race has a rufous coat with conspicuous spots. The bush buck has a characteristic bark and equally distinctive track and dung.

The SITATUNGA (*Tragelaphus spekei*) (Sowe of the Umbundu) is found in marshes and swampy rivers, especially where there is much papyrus. There are probably two races in Angola: *T. s.*

gratus in the west and centre, and *T. s. selousii* in the south-east. It was in Angola that Serpa Pinto first saw and described it, as actually able to live under water and breathe through the tips of its horns! I have seen them in the Cokue, Loando, and Luxeashi Rivers, and near Chuso village on the Coanza River, and know it is to be found in a number of papyrus marshes in the Bailundu province and near Melanje. They are said to be found in the Kasai and its tributaries, in the district of Lunda, but are more numerous among the marshes of the Cuando, Cubango, Cuchi, and Cueuti Rivers, in the east and south-east of Angola.

Persistently hunted by burning the papyrus cover and spearing them from canoes, the sitatunga is becoming rarer in inhabited country. I shot a 29-inch head, and saw an old one on a grave measuring 33 inches. A type of sitatunga with horns no bigger than those of a bush buck was described to me as living in the Andulo district of Bailundu. At least two of these heads were supposed to be in the possession of a Mr. Gordon, a chemist, once resident in Angola and now in South Africa.

Penrice's Water Buck (*Cobus penricei*) (Chisema of the Umbundu, and occasionally called Moket) is widely distributed. I found its spoor near the following rivers: Loando, Coanza, and Coporollo. It is reported along portions of the Cunene, Cubango, Cuito, and Cuando Rivers and some of their tributaries, and on the eastward-flowing tributaries of the Zambezi. It stands nearly 4 feet high at the shoulder, weighs from 400 to 450 lb., has a coat of long dark hair, the carriage of a stag, and belongs to the *defassa* group of these animals, which usually have a white patch on the rump instead of the white elliptical ring of the type water buck (*Cobus elipsiprymnus*). It differs from the other *defassa* water bucks by its darker coat, which in an old buck looks almost black, and the absence of the white rump patch. The beautiful lyrate horns measure up to 29 inches. The water buck is a grazer, living in herds of ten to twenty, usually near water, in open grass plains and forests. The dung, when formed, resembles that of the eland, but is smaller in size; when soft (rainy season or spring) it looks like that of cattle. They are wary animals, but more readily tracked than most antelopes, as they seem to keep to localized feeding-grounds and lying-up places. I once had the unusual experience of sitting on what I thought was a dead water buck, and being suddenly knocked over by the animal, which had been concussed by a bullet which grazed the spine. I am glad to say that I persuaded myself to let the buck escape.

The Angolan Lechwe.—One of these animals, called by the natives "songue," was wounded on the Loando River and the head recovered two days later. Fired at from a great distance, I thought at first that the animal was a Buffon's cob. These "songue" were met with in herds of from twenty to fifty, grazing by the banks of the Loando, Coanza, and Longoé Rivers, and the natives informed me that these animals were to be found to the east of the Loando and along some of its tributaries. This antelope is also reported by Serpa Pinto, Capello, and Ivens to be present on the Cuando, Cuito, and Cubango Rivers, and some of their tributaries; so that its distribution is very widespread in Angola. The animals when seen at a distance of some 300 yards appeared to be about the size of the Black Lechwe (*Cobus lechwe smithimani*), but the horns seemed to be distinctly smaller (the specimen I obtained, one of the biggest heads observed, measured only 20 inches, a length below the average of the ordinary black lechwe). The colour of the coat was considerably lighter than that of any of the black lechwe I have shot in north-eastern Rhodesia. These two differences of colour and size of horns, together with slight differences in the facial bones, tempt me to believe that the Angolan lechwe is a new variety closely allied to the black lechwe of north-eastern Rhodesia; and the distance (several hundred miles) which separates these two groups of lechwe is, I think, an additional reason supporting this claim. The track and dung resemble those of other varieties of lechwe.

The Reed Buck (*Cervicapra arundincum*) (Onusi of the Umbundu, Sogo of the Coanza people).—As far as I am aware there is only one variety of this animal, which is one of the most widely distributed of all the antelopes in Angola, being found in all but the most forested and desert country. The heads I shot or saw were not very big, the largest horns measuring just over 13 inches in length. Standing some 3 feet high at the shoulder, the reed buck in Angola has a coat which is more rufous and less grey than in some other parts of Africa. This attractive antelope seems to prefer grass land and abandoned fields for its haunts, lies close, escapes with speed, and whistles shrilly when alarmed, generally to the misfortune of the hunter who has thus had his whereabouts betrayed, probably when pursuing a nobler quarry. As the reed buck yields about the best venison in Africa, this pretty animal provides more than his share of food for the needs of the hungry hunter.

The DUIKER (*Cephalophus grimmi*) (Ombambi in Umbundu) is probably the commonest and most widely distributed of the antelopes in Angola. I met it frequently throughout the trip. My best head measured nearly 5 inches in length.

The BLUE DUIKER (*Cephalophus monticola* ?) (Okambele).—This tiny blue-grey antelope is fairly plentiful in the arid and open forest country south of Benguella. I met this duiker and its spoor along most of my journey from Catangue to Lubango, and on one occasion one actually ran on to my legs when pursued by a leopard or serval.

Cephalophus leucochilus, a southern and bigger race of *C. dorsalis*, has a black dorsal stripe on a uniform rufous coat, with light underparts.

The YELLOW-BACKED DUIKER (*Cephalophus silvicultor*) (Okahuhu, possibly Ocikuma, in Umbundu).—This rare animal is present, I believe, in the forest of the Portuguese Congo district, and a missionary friend said that an animal whose skin closely resembled that of this duiker was shot in a wooded ravine of one of the Bailundu hills (south of the railway), and he had heard that these duiker, though rare, were to be met with in that country.

The KLIPSPRINGER (*Oreotragus saltator*) (Ohoha in Umbundu and Quillenge) is found on most of the hills in the centre and south of Angola. Its curious grey-coloured coat of bristly hair, the tiny pig-like track, and the remarkable powers this pretty little animal possesses of jumping from rock to rock, are characteristic and unique.

The ORIBI (*Oribia scoparia*) (Omunya in Umbundu) is distributed all over Angola, living in the savannah forest and scanty vegetation. I think that more than one race of the graceful fawn-coloured antelope will be found in Angola, as I saw one skin that was not *O. scoparia*. The oribi prefers open country, trusting to its keen eyes, wariness, and speed.

The STEINBOK (*Oribia campestris*) (Kapu in Umbundu).—I believe I once saw one of these little antelopes near the Loanda River; they are found in South Angola in the Cubango and Cuito valleys.

CARNIVORA. — The LION (*Felis leo*), Ohosi, Onganga, Ondumba (Umbundu), N'dumba (Coque and Luimbe), Onkosi, Onkenyama (Quillenge); once numerous in Angola, these animals have diminished with the destruction of the game, and are now rarely met with except in the south and south-east of the colony. Larsen, a well-known hunter, killed seven lions in one day, many years ago, on the Sindé River. Though four of them were cubs, it would be hard to find such a troop to-day. This skilful hunter came to an unhappy end, being poisoned, it is believed, by a jealous native wife, who, though she had previously helped him to track and even shoot elephants, could not tolerate a younger rival.

Capello and Ivens tell the story of one lion which (sixty years ago) actually entered the house near Providencia of a Portuguese settler who had already killed twenty-six of these animals. The Portuguese, who beat off the lion with a heavy candlestick, and wounded it with a bullet, forced it to take refuge in the kitchen, where it was killed with his head jammed between the legs of a heavy table.

Lions are eighteen months of age before they cut their permanent canines and can kill for themselves. Probably for this reason a similar interval separates the ages of succeeding litters. Spotted on the legs at birth, lion cubs lose these markings, possibly a protective colouring, when they grow older and do not need them for their work at night. The colour of the lion's mane depends on that of his parent, as does the colouring of hair in human beings, though, contrary to what occurs with us, it is the fair mane that predominates among lions.

The education of young lions in killing their prey is a costly business where stock is concerned, as their parents will sometimes encourage them to kill half a dozen animals in one night for practice.

Lions hunt by silent stalks up wind or by driving. In the latter case one animal of the troop will frighten the game or stock by giving them its scent and roaring loudly; and in this way try to drive the animals on to the other members of the troop, who are silently lying in wait for them. The lioness is more dangerous than the lion, especially if she has cubs; a friend of mine was attacked not long ago by a lioness whose cubs were quite 100 yards away in some reeds, and my path has been disputed in similar circumstances, but the males, though present in each instance, made no demonstration.

Lions, however, vary in courage; I have met fearless animals, and one so timid that he refused to charge, though wounded and followed in thick bush all day. All lions are more dangerous at night, especially when hungry, and when benighted in a lion country the safest course is to roost in a tree. A lion kills every second or third day, but may go without food for several, and would then eat anything he finds, including porcupines, though the latter often cause him great suffering and even death by leaving their quills in his pads or jaw. I once killed a lioness crippled by quills which had burrowed into both her fore paws.

The lion may be met at dawn, feeding on his "kill," or in the late evening when returning to it; and only by accident during the day. On the night he kills, the lion drinks the animal's blood, disembowels it, separates the offals, and eats from the hind quarters. If watched for, a platform is safer, though harder to shoot from than a pit or thorn fence, as the lion does not appear to be able to scent or see a hunter placed above him, and if the "kill" is moved it should be handled as little as possible. A wounded lion, when followed and at bay, is probably the most dangerous animal in the world; a powerful double-barrelled rifle is a help, but even more important is the need of keeping your nerve and your fire till the lion is near enough to hit with certainty.

The LEOPARD (*Felis leopardus*) (Ongue in Umbundu and Quillenge, Ingui in Cokue, Ingue in Luimbe) is distributed all over Angola.

Though I never saw a leopard during my trip, their tracks were met with throughout, and every forest-girt village appeared to have its "ingue," taking toll of dogs and goats by night, and lying up near forest stream or pool by day. The track and dung are smaller but similar to those of the lion, as are its life-history and many of its habits; and the leopard is equally dangerous when wounded.

The length of an adult male from nose to tip of tail may be as much as 7 feet 6 inches, that of the female 7 feet, and their weight 100 lb. and 80 lb. respectively. The African leopard is lighter in body than the Indian variety, and its spots are smaller in comparison.

Unlike the majestic cadence of the lion's roar, the grunt of the leopard has little musical sound, and is a rasping note like an unoiled saw cutting hard wood. The growls of both animals, however, are more alike, differing in volume rather than note. A leopard's "kill" differs from a lion's, in the face and tongue, lungs or heart, being eaten before the hindquarters.

The Hunting Leopard (*Cynælurus jubatus*) (Emalanga in Umbundu) is found sparsely in the centre and south of Angola. The hunting leopard has a shorter head and smaller, more solid-looking spots than the leopard; but the most important difference is its dog-like pads, which show in a track the points of the nails, which cannot be entirely retracted as with the cat. Shorter and lighter but taller than the leopard, the hunting leopard is built for speed and trusts to it to get its prey.

The Hyænas include the Spotted Hyæna (*Hyæna crocuta*) (Ocimbungu and Munguli), found sparsely all over Angola, but chiefly in the south, and the Brown Hyæna (*Hyæna brunnea*), found only in the south.

I heard the weird cry of the hyæna at several of my camps, but never saw one of these animals while crossing Angola. This quaint, ungainly beast, with his dirty yellow coat and indistinct spots, high forequarters, and sloping back, is perhaps normally a carrion eater, content to dine off the leavings of a swifter and more skilful hunter like the lion or leopard, for his heavy jaws can help him to make a dinner on bones and skin alone. He sometimes hunts wild animals for his food, or tries to steal a dog or goat from a neighbouring village, and any meat or trophy from a hunter's camp; and I suffered on one occasion from the effects of his remarkable cunning and persistence in this direction in one of my camps in Angola.

Occasionally the hyæna will attack human beings, especially when asleep at night. They have killed many a child, and mangled some adults, for with his immensely powerful jaws a hyæna can and has removed most of a man's face. One night when lying very ill under a tree in north-eastern Rhodesia, a hyæna approached me cautiously from behind the tree, and I feel convinced that had I not been awake and able to drive him off, the animal would have attacked me.

The CAPE HUNTING DOG (*Laon pictus*), Ombinji, is widely distributed, but rare. A little smaller than a hyæna, it has its sloping build, but a buff coat with black and russet patches. I have thrice seen the dogs hunting, in a crescent formation, whose tireless members take up the running alternately after their bewildered quarry.

Of lesser carnivora are the JACKALS (Ombulu), Black-backed (*Canis mesomelas*) and Side-striped (*C. adustus*); AARD-WOLF (*Proteles cristatus*); SERVAL (*Felis serval*), WILD CAT (*F. orcreata*), and CARACAL (*F. caracal*); a CIVET (*Viverra civetta*), Cambumba, and two GENETS, *Genetta setabæ* and *G. ludia*.

There is more than one variety of MUNGOOSE.

Of the PRIMATES, the GORILLA (*Gorilla savagei*) and CHIMPANZEE (*Anthropithecus*) are found in the Cabinda province; GUEREZA MONKEYS in the north and east; GUENONS, including the Vervet Monkey, the YELLOW BABOON (*Papio cynocephalus*), and a MANDRILL; there are two LEMURS, *Galaga monteiri* (Bobo, Chicafo) and *G. senegalensis* (Nono).

Among minor animals are the RATEL (*Mellivora ratel*), Onganba, ANT-BEAR (*Orycteropus capensis*), Ongimbo, SCALY ANT-EATER (*Pangolin manis*), Chaca, HARE (*Lepra*), Cadimba, ROCK RABBIT (*Dasyprocta*), Ohuti, and PORCUPINE (*Hystrix*), Chissaca.

BIRDS.—Bocage described 700 species of Angolan birds: 200 found in the coastal zone, 257 in the lower plateaux, and 386 in the open and inner highlands. Of the total, 332 were Passeres, 137 Picariæ, 89 Grallæ, 59 Accipitres, 20 Gallinæ, 12 Columbæ, 15 Gaviæ, 14 Anseres. The following were personally met or are named by the natives:

Among Game Birds are the Ostrich (*Struthio australis*), Ombo, Greater Bustard (*Otis kori*), and Lesser, *O. ruficristata*, *O. cafra*, *O. melanogaster* (all Tua); the Guinea-fowl, *Numidia coronata*, *N. papillosa*, and *Guttera cristata* (all Hanga); the African (Bare-necked) Pheasants, *Pternistes rubricollis* (Unguari) and *P. Lucani*; the Francolins, *F. Hartlaubi* (Muhcle), *F. pileatus* (Kalanguc), *F. schellgeli* (Cambambo), *F. adspersus* (Muclle); the Quail (*Coturnix africana*, *C. delagorguei*), Dinguian Guia, and a Turnix; the Sand Grouse, *Pterocles bicinctus* (Kambanjo) and *P. namaqua*.

Among Pigeons and Doves are *Columba calva* and *C. guineensis*, *Turtur semitorquatus* (Ecuti), *T. damarensis* (Bango), *T. ambiguus* (Dindié), *T. senegalensis* (Kalungumbo), *Chalcopelia afra* (Bobo), *Œna capensis* (Kagolulu). In Snipe, *Gallinago major* and *G. nigripennis*. Among Geese are the Spur-Wing (*Plectropterus gambensis*), Janda; Egyptian Goose (*Chenalopex ægyptiacus*), and Dwarf Goose (*Nettapus auritus*). Among Duck, the

Knob-bill (*Sarcidiornis melanotus*), Violo; the Shovellers (*Spatula capensis* and *S. clypeata*), the Whistler and White Face (*Dendrocygna fulva* and *D. viduata*), Imbanteque; the Diver Pochard (*Nyroca capensis*); the Whiteback (*Thalassornis leuconota*); and Yellowback (*A. undulata*). Of Widgeon and Teal, the Cape Widgeon, *Anas capensis*, *A. hottentota*, and the Yellow Bill, *A. xanthorhyncha*.

Among Waders (the Storks) are the Marabou (*Leptoptilos crumenifer*), White Belly, *Ciconia Abdimii* (Humbi) and *C. episcopus* (Hombo); Hammer-Head (*Scopus umbretta*), Kahumba. Of Cranes, the Crowned (*Balearica regulorum*) and Wattled (*Grus carunculata*), Panda; of Herons, the Giant (*Ardea goliath*) and *A. rufiventris* (Bondo). The White Egret, *A. garzetta* (Dila nanhe), *A. cinerea* (Londera Angundo), and *A. alba* (Nhane). Of Ibis, the Green Ibis, *Ibis hagedash*, and *I. æthiopeca* (Delecca). There are several Pelicans (Kamakundi).

Among Birds of Prey are the Tawny Eagle, *Aquila rapax* (Lucoi); the Crowned Eagles, *Spizaëtus bellicosus* (Gonga), and *S. coronatus* (Ingo); the African Hawk Eagle (*Hieratus spilogaster*), Brown Eagle (*H. Walbergi*), Crested Hawk Eagle (*Lophoaëtus occipitalis*), the Bateleur (*Helotarsus ecaudatus*), Kombi, and the Sea Eagle (*Haliaëtus vocifer*), Qualucua. Of Harrier Eagles, the Black-breasted (*Circaëtus thoracicus*), the Banded (*C. fasciolatus*), and *C. cinereus* (Ankubi). Among Kites are the Yellow Bill (*Milvus ægyptius*), Kikuambe, and *M. migrans;* the Black-shouldered Kite (*Elanus cæruleus*), Kahahula. There is a Harrier Hawk (*Polyboroides typicus*), Lucoi; the

Hobbies, *Falco subbuteo* (Cabemba), and *F. buteo* (Gonga); the Buzzards, *Buteo auguralis*, *B. augur*, and *B. desertorum* (Lucoi). Of Falcons and Lesser Hawks are *Falco biarmicus* (Lucoi), *Cerchneis rupicola* (Banvo), and *C. vespertina* (Katebi). The Secretary Bird (*Serpentarius secretarius*), Mukende, is rare. Of Vultures are the Griffon (*Gyps Kolbei* and *G. Ruppeli*), the White-backed (*Pseudogyps africanus*), Icungo, the Black (*P. auricularis*), the White-headed (*Dophogyps occipitalis*), and the Egyptian (*Neophron percnopterus*). Among Owls are the Giant (*Bubo lacteus*), Spotted (*B. maculosus*), Cimbi; Barn (*Strix flammea*), Coco, and *S. capensis*; *Scops leucotis* and *S. capensis* (Casseia), and *S. perlata* (Cahombo).

Among other noticeable birds are the Crows and Ravens, *Corvus scapulatus* and *C. capensis* (Kiquamanga); the Hornbills include *Bucorvus cafer* (Egungoashito), like a long-billed turkey, with a booming call; *Tockus melanoleucus*; the Yellow-billed (*T. flavirostris*), which interns the nesting female in a tree trunk; the Red-billed (*T. rufirostris*)—are all called Sunguiandondo; the Indicators, Major and Minor and *Sparmanii* (Sequi), which lead the hunter and ratel to hives; the Grey Lory, or "Go away!" Bird (*Chizœrhis concolor*), Gucre, and Rhinoceros Bird (*Buphaga africana*), which annoy the hunter and alarm game; the Cuckoo family, *Cuculus canorus* (Kinkanga), *Chrysococcyx cupreus* (Kachibo), and *C. Klaasi* (Katendi); *Coccystes glandarius* (Talo), and *C. jacobinus* (Kampurulla); and *Centropus superciliosus* (Mucuco), *C. monachus* (Canunzo); and the

Goat-suckers or Night-jars, *Caprimulgus Fossei* (Ximbamba), *C. shelleyi* (Huicumbamba), and *Cosmetornis vexillarius* (Lambamba).

The Swallows include *Hirundo angolensis*, *H. Monteiri*, *H. puella*, *H. filifera*—all called Piapia. The Flycatchers, *Terpsiphone cristata* (Catambuixe), *T. melanogastra* (Engundobeoli anfinda), *Batis molitor* (Catita Angolo), *B. minulla* (Kaloqueio), *Muscicapa cinereola* (Katiete), and *M. lugens*; *Parisoma subcœruleum* (Tubike), *Campephaga nigra* (Bimbe), and *Bradyornis ater* (Mungando).

Among Shrikes, the Red-backed, *Lanius collurio* (Kitiapi), *Nilaus brubru* (Kandilanakiuna) and *N. affinis* (Kitikenene); *Fiscus capelli* (Quimbambe), *F. Sozæ* (Ninbotan), *Eurocephalus anguitimens* (Kiteeuria); *Prionops talacoma* (Kambimba), *P. Retzii* (Kanguele); *Telephonus erythropterus* (Quioeo), *T. trivirgatus* (Himba), *T. minutus* (Gundo); *Laniarius atrococcineus* (Etungula); *Dryoscopus cubla* (Kiriamahuco), *D. major* (Sequi), *D. neglectus* (Gorototo), *D. angolensis* (Entuecula).

Of smaller birds, the Titmice (*Parus afer* and *P. rufiventris*), both Caxito; *Zosterops senegalensis* (Hoio); and especially the Weavers, *Textor erythrorhynchus* (Quicengue), *Plocepasser mahali* (Quiçoçoria); *Hyphantornis velata*, *H. intermedia*, *H. xanthops*, *H. ocularia*—all called Janja; *Sycobius rubriceps* (Ulojanja), *Euplectes oryx* (Quisengo), *E. minor* (Saco), *E. taha* (Changombi), *Penthetria albonotata* (Dunguequilele), *P. Bocagei* (Lele); the Widow Birds, *Vidua principalis* (Cahengua) and *V.*

paradisea; *Spermestes cucullata* (Canguijambala), *Amadina erythrocephala* (Xiquere), *Uræginthus phœnicotis* (Kaxexe), *Pytelia melba* (Kangungo), *Estrelda Quartinia*; and the Finches, *Passer arcuatus* and *P. diffusus* (Kimbolio), *Xanthodira flavifulga* (Sue-sue), *Crithagra chrysopyga* (Kabilo), *Fringillaria tahapisi* (Gungo), and *F. flaviventris* (Kianja).

Among specially beautiful birds are the Plantain Eaters, *Corythaix Livingstonii* and *C. erythrolopha* (both Andua), *Turacus giganteus* (Barococo), and some of the Parrots, Hoopoes, and Orioles; the Bee Eaters, *Merops apiaster* and *M. bullockoides* (both Combua-combo), *M. superciliosus* (Lengue), *M. erythropterus* (Caguerre-a-fele); the Rollers, *Coracias caudata* and *C. nævia* (Ambeta), and *Hapaloderma narina* (Kissai); the Kingfishers, *Alcedo semitorquata*, *Corythornis cyanostigma*, *Ceryle rudis*, *C. maxima*, *Halcyon cyanoleuca*, *H. senegalensis*, *H. chelicutensis*, *H. semicærulea* (all called Sumbo), and *H. malimbica* (Telampuica); the Honeysuckers, *Nectarinia gutturalis* (Kanzole), *N. superba*, *N. bifasciata* (Kanjonjo), *N. ludovicensis* (Kangoi), *N. talatala* (Mariapindo); the Orioles, *O. natatus* and *O. larvatus* (both Cupio); and *Lamprotornis purpurea* (Melombe-anganza), *Lamprocolius splendidus* and *L. sycobius* (Quire), *L. acuticaudatus* (Eiabairo), *L. bispecularis* (Janja), and *Pholidauges Verreauxii* (Donga).

Of *Singing Birds*, Thrushes and allied birds, including *Cossypha natalensis* and *C. Bocagei* (Maxoxolo), *C. Heuglini* (Quitone), *C. barbata* (Quiepele); *Turdus strepitans* (Kukenekene), *Saxi-*

cola monticola (Kaniamalango), *S. Galtoni* and *S. pileata* (both Kissandombungi); *Crateropus melanops* (Numbela), *C. Hartlaubi* (Musosa), *Cichladusa ruficauda* (Kitole), *Chætops pycnopygius* (Kakiria); the Pipits, *Anthus erythronotus* (Karapala), *A. pallescens* (Canunzo), *Macronyx croceus* (Dibaquela); many of the Finches, mentioned elsewhere; and the Larks, *Calandritis cinerea* (Tioco), *Mirafra africana* (Kipembe), *M. apiata* (Kitianonhe), and *M. nigricans* (Kenibange).

Of Reptiles, there are two Crocodiles, *C. vulgaris* (Ongandu) and *C. cataphractus*, and a Ghavial, *C. frontatus*; water and land Iguanas, *Varanus niloticus* (Sangoe) and *V. albigularis* (Tatu); several Geckos and Lizards and Chameleons; *Pachydactylus Bibronii* (Camungluquira), *P. ocellatus* (Canomba), *Agama planiceps* (Calango), *A. armata* (Canomba), *A. atricollis* (Ubango), *Eremias lugubris* (Cangala), *E. serripes* (Cocolo), *Gerrhosaurus nigrolineatus* (Cangalanjamba), *G. validus* (Combe), *G. trivittatus* (Humbo), *Mabuia striata* (Buio), *M. varia* (Icacenene), *M. punctulata* (Cocola), *M. acutilabris* (Cocola), *M. binotata* (Bandahulo); *Lygosoma Ivensii* (Muntalandonga), *L. Sundevallii* (Humbo), *L. anchietæ* (Sonjolo); *Sepsina Copei* (Humbo); *Chamæleon dilepis*, *C. quilensis*, and *C. gracilis* (all Longairo).

Of over a hundred species of Snakes in Africa less than half are poisonous. Of these, the most dangerous are the Mambas, which can kill a man in a few minutes, travel half-erect as fast as a horse, and bite higher than a gaiter; the Angolan Mambas are *Dendraspis neglectus* and *D. angusticeps*

(Andala). The Cobras include *Naia haje* (Cuiba), *N. anchietæ*, *N. nigricollis* (which can eject its venom to some distance and blind its enemy), and *N. annulata*. The Vipers include the Puff Adder, *V. arietans* (Buta), *V. rhinoceros*, *V. caudalis*, and *V. heraldica;* the Night Adder, *Causus rhombeatus* (Bandargila) and *C. resimus* (Banda emfila). Non-poisonous snakes include the Pythons, *P. natalensis*, *P. sebæ*, and *P. anchietæ*; *Helicops bicolor* (Muzuzu), *Boodon lineatus* (Onjo), *Philothamnus irregularis*, *P. heterolepidotus* (Chilembe), and *P. dorsalis* (Lubio); *Prosymna frontalis* (Golongo), *Rhagerhis tritæniata* (Uçonjolo), *R. acuta* (Colombolo), *Psammophis sibilans* (Uanga), *Dryiophis Kirtlandii* (N'hoca-menha), *Bucephalus capensis* (Turulangila), and *Crotaphopeltis rufescens* (Bandangila).

FISHES.—Of the numerous *Sea* fishes, the Pongo has the curious habit of making a drumming noise against the hulls of fishing vessels; while the liver of a Dog-fish (Cassao) yields oil. Of *River* fish, there are the curious snouted fish, *Genyomyrus donnyi*, and *Gnathomemus numenius*; and the Mud Fish (*Protopterus anectans*), which which can bury itself in mud.

Of sporting fish, the Barbers, *Clarias silurus* (Bagre) and *C. gariepinus*, are ground feeders; the big Yellow Fish (*Varicorhinus brucei*) occasionally takes fly; the Tiger Fish (*Hydrocyon lineatus*) is the finest fighter of the fly-taking fish, but can bite through ordinary tackle with his strong teeth.

English.	Umbundu.	Cokue.	Luimbe.	Quillenge.
Buffalo	Onyani	Pacassa	Njandi	Onyati
Bush buck	Ongulungu	...	...	Ongulungu
Bush cow	Pacassa	Pacassa?	Pacassa	...
Bush pig	...	Combo	...	...
Cob, lechwe	Osonge	...	Songue	...
,, water buck	Ocisema (or Chisema)	...	Moket	Ocisema
Duiker, common	Ombambi (or Bambi)	...	Bambi	...
,, blue	Okambele	...	...	Okambele
,, yellow-back	Okahuhu	...	...	...
,, ,,	Ocikuma (?)	...	...	...
Eland	Onuima	...	...	Ongunga
Elephant	Onjamba	Njamba	Njamba	Onjamba
Giraffe	Onduli	Njamba nduli	...	...
Hartebeeste	...	...	...	...
Hippopotamus	Ongeve	Nguvu	Nguvu	Ongeve
Hunting dog	Ombinji	...	...	...
Hyæna	Onguli	Cimbungu	Munguli	Ocimbungu
,,	Ocimbungu	Munguli	...	...
,,	Okanyani (spotted?)	...	...	...
Jackal	Ombulu	...	...	...
Klipspringer	Ohoha	...	...	Ohoha
Kudu	Onjili	...	...	...
Lion	Ohosi	N'dumba	N'dumba	Onkenyama
,,	Ondumba	...	...	Onkosi
,,	Onganga (?)	...	...	...
Leopard	Ongue	Ingui	Ingue	Ongue
,, hunting	Emalanga	...	...	...
Oribi	Omunya	...	...	...
Oryx	Galengue	...	...	...
Reed buck	Onusi	...	Sogo	Onusi
Rhinoceros	Ocimanda	Kevukevu	...	...
,,	...	Kaloko (?)	...	...
Roan antelope	Omalanga (or Malanka)	...	...	Palanka (or Ompalanga)
Sable antelope	Sumbakalogo	(Kolwah in	Melanje	district)
Situtunga	Ocisovio	...	...	...
,,	Ocisowe	...	...	...
Spring buck	Omenye (?)	...	...	...
Steinbok	Kapu (?)	...	...	...
Wart hog	Onguluve	Onguluve	...	...
,,	Ongala	Ocihenge	...	...
Wildebeeste, blue	Gelangue	...	...	...
Zebra	Ongolo	Ngolo	Ngolo	Ongolo

English.	Umbundu.	Cokue.	Luimbe.	Quillenge.
Animal	Ocinyama	Kasitu	Situ	Ocifitu
Baboon	Epundu	Mahunju	(Nshima)	Epundu
Bird	Onjila	Kanjila	Kazila	Ocinjila
Crocodile	Ongandu	Ngandu	Ngandu	Ongandu
Fish	Olusi	Ishi	Inshi	Onosi
Guinea-fowl	Ohanga	Kanga	Kanga	Ohanga
Hare	Candimba	...	...	...
Monkey	Osima	Cima	Ishima	Ocindindi
Parrot	Ocikenge	Cikenge	Inka	Ocisui
Porcupine	Chissaca	...	...	...
Rock rabbit	Chuti	...	...	...
Snake	Onyoha	...	Lunoka	Onyoka
Tortoise	Ombeu	...	...	...

GAME LICENCE

The following animals may be killed on an ordinary licence, which costs the resident 30 escudos and a visitor 15 :

Animal.	No.	Animal.	No.	Animal.	No.
Bush cow	15	Buffalo	10	Hippopotamus	6
Roan	15	Rhinoceros	10	Sable	6
Wildebeeste	15	Water buck	10	Kudu	6
Hartebeeste	10	Oryx	10	Eland	5

Elephant, zebra, and ostrich may only be killed on a special licence, which costs the resident 25 escudos and a visitor 50.

Female and the young of animals are not permitted (officially) to be killed. In theory there is a close season from October to April.

Although this licence allows 118 large animals to be killed for a few shillings, it is rarely taken out or any game laws enforced.

CHAPTER XVIII

Some Insects met by the Way

INSECTS play a large part in the economic life of Angola, and their influence unfortunately is for evil rather than good.

Though innumerable bees are a source of wealth to the colony, the mosquito and tsetse fly bring much sickness to man and beast in certain districts, and the destructive white ant is ubiquitous.

These termites, which are not ants at all except in habits, are amazingly abundant in the country, where their mushroom-shaped and pillared ant-hills sometimes appear in such numbers as to resemble vast graveyards. Some of the ant-hills are of great height and age, and may be inhabited by other kinds of ants, or by reptiles, rats, and even snakes; all of which are probably unwelcome, and lodgers. It is truly astonishing that these minute, soft-bodied insects can build such large houses with iron hard walls, but the very fragility of the insect compels such protection, and their roads to work and working galleries are alike covered in with earth cemented with a juice which they secrete.

Like ants and bees, these termites have males, females, and neuters in the nest; soldiers, queens, and workers. In his work the soldier is provided with a formidable pair of jaws, the worker with a knobbed head to build or mend his house with.

I spent many hours while in the country opening up ant-hills and watching ants at work, but never met the elaborate designs of royal apartments for queens and nurseries for larvæ, so often described by older writers as the work of termites. The ant-hills in Angola consisted of large numbers of irregularly shaped cells and connecting galleries, while the queen ants had comparatively small cells.

The termites seemed to work ceaselessly; building, storing food, tending the cell gardens of fungi grown for food, or looking after the queen and the larvæ which are their special charge.

All white ants are blind and dread the sunlight, and appear to favour the night for their hardest work. When building their tunnels or houses, they may actually be heard, if the night be still and they are working on any resounding surface, such as a wooden board or matting.

When the time of mating comes, the winged males and females emerge from the ant-hill and fly off to form new colonies. Both soon lose their wings—but in the period of flight millions find a sudden end in the crop and maw of bird and reptile, while even the Angolan native is not above adding "salale," as the Portuguese call the white ant, to his "infundi," as a chutney or caviare.

The destructiveness of white ants is proverbial. While on my trip in Angola, a pair of boots were damaged in one day, a wooden box destroyed in two; and this little insect, which, for good or ill, is the scavenger of all timber, does immense damage to furniture, wooden railway sleepers, pit props, and any structure where untreated wood is employed.

Fortunately the white ant has many enemies; for besides the birds which destroy them in their period of flight, the ant bear and armadillo take nightly toll by tearing down the ant-hills with their strong claws, and licking up the white ants in hundreds with their whip-like tongues.

The most feared of all Angolan ants is the "Driver"—so called because, fierce and strong-jawed, he moves in columns of such countless thousands as to drive every living thing from his path. All animals and wise men avoid him, and woe betide anything which lingers in his way, for first death and then annihilation are certain if escape is impossible. And the drivers cannot always be avoided; for like most ants they are sensitive to sunlight, and forage usually in the evening or at night, when their columns, inches wide but furlongs deep, may attack a village or a hunting camp if these come in their road, or offer a prospect of food.

The driver will occasionally start his foraging on a cloudy day, or, if in a shady forest, in sunshine. Should they be caught by sunlight, the soldiers form a living vault to protect the workers from the sun.

One night in Angola I was driven off my camping-ground by the invasion of a column of driver ants, and the native carriers, lying practically naked on the ground, were badly bitten; and though they shrieked with laughter at each other's bites and troubles at the time, had painful bodies and rueful faces the morning after.

I have suffered a similar experience a good many times in other parts of Africa, and in almost every instance have been bitten before I could get away. As the soldier class of the driver ant has very powerful mandibles, their bites are very painful, and so deep that the ant's head has to be pulled out carefully to free the jaw from the wound.

There are many other kinds of ants in Angola,—red, brown, and black; building below or above the ground, in ant-hill, tree trunk, or tree leaf,—but though I opened up several nests I never once found any "ant slaves."

It is well known that certain ant tribes (usually red ants) capture and carry off captives from their weaker neighbours (usually black) to work as slaves. Of course whenever a nest was opened up the worker could be seen carrying off eggs and cocoon-covered larvæ, while the soldiers of the colony would come out to give battle to the disturber, but all the ants were of the same species.

Though searching often, I found none of the "agricultural ants" which are stated to collect certain grass seeds and even sow some of them round their home, so as to procure their food supplies more readily.

One reddish and rather large tree ant in Angola made a home in a nest of leaves sown together with silken thread, probably provided by its larvæ, which possess this material for the manufacture of cocoons. The parents bring out their babies and coax or squeeze them into parting with some of this larvæ thread, to unite the ends of the leaves together.

In two of the nests I found a few wood aphis, but was not sure if these were accidentally included or were serving as " milch cows " for the ants, who sometimes keep and feed the aphis, stroking and " milking " them to gather the honey they secrete.

Plentiful in Angola is the tiny ant, which one finds in food-stuffs in so many tropical and sub-tropical countries. It has come to Madeira from South America, and is causing havoc in this island, and with the multiplication of ships and shipping routes the distribution of this little ant promises to become world-wide. The only way to keep food free from them is to place it in the sunlight, which they dread, or in dishes surrounded by water; and it is advisable in houses or permanent camps to place the legs of dining-tables, food cupboards, and meat safes in small dishes filled with paraffin, for water under such circumstances may breed mosquitoes or evaporate.

Besides the house fly, which was numerous at the coast towns, and the " Stomoxys," a biting fly which resembles it, there was an old friend met years ago elsewhere in Africa and christened the " suicide fly," though he really belongs to the bee family.

Very small and with no active offensive properties, this fly does not bite or sting, and his odour when you crush him is aromatic rather than disagreeable, but of all the obstinate little insects, the suicide fly is the worst. If one stands for a moment in the shade, he hovers round your face in scores, crawling up your nose, into your eyes, up your ears, and all over your face. His object seems to be moisture or a home, and the need must be very great; because no fear of death deters him, and his persistence being profound and his powers of flight very small, he dies easily, leaving one with an ever-shortening temper and a curious aromatic smell from his crushed body.

When one tried to take aim after perhaps a long, hot, and painful stalk, the suicide fly, by crawling up the eyes and nose, would almost prevent one from firing and often cause one to miss. Rest or sleep was only possible with one's face under the hot and suffocating shelter of a handkerchief, for otherwise eyes, throat, and nostrils would rapidly be invaded and rest become impossible.

There were some large flies and wasps in Angola, looked on as friends, because they left one alone; and among them were the beautiful dragon-flies, which usually live near water. I always cheered these dragon-flies on their way, wishing them good hunting—especially of the suicide flies.

There were the mantis insects (Mantidæ), with curious-looking heads and big eyes, and their great arms with toothed edges. I am an admirer of the mantis, because it is a good hunter, patient but sure in its stalk; and a friend, because it lives largely on insect pests.

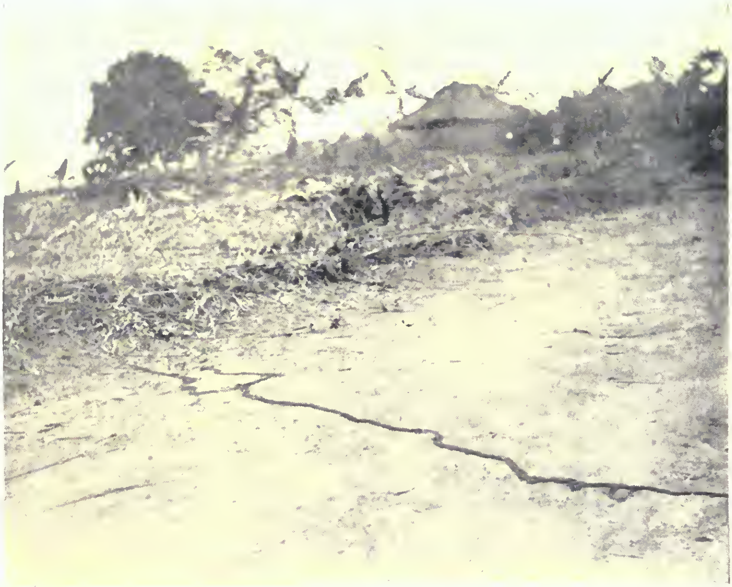
When in Sierra Leone before the war, I had a mantis which almost answered to the name of

TELEPHOTOGRAPH OF DUIKER HIDING IN GRASS

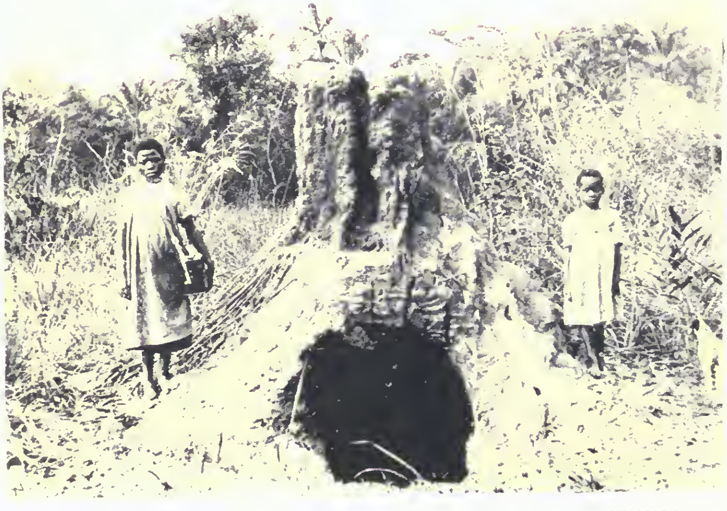
[*See page* 267

THE ORYX

[*See page* 250



DRIVER ANTS ON THE MARCH



A MIXED LODGING—AN ANT-BEAR BURROW IN AN ANT-HILL

[*See page* 325

Christopher, till it was found to be a lady, and the name was hurriedly changed to Emily.

Emily would attack anything up to her own size and weight—spiders, wasps, and even scorpions; but she especially loved flies, and I have seen her hold a fly in either arm, eating from each one in turn.

She always liked her food alive, and while I discouraged this habit with moths and other harmless insects, she was allowed her way with flies. Though she murdered three husbands, ate them in moments of passionate affection, yet she died doing her duty to the insect world, leaving to posterity, and a natural history museum, a gossamer nest and a family of many hundred eggs.

The egg nest which Emily made was of oval form, closely woven from silky material, and may be seen in most parts of Africa attached to the stem of a bush, a grass stalk, or a stone. The mantis insects, sometimes called "stick" insects from their resemblance to the twigs on which they rest, are of various sizes, shapes, and colours. Emily was about 3 inches long and of a bright green colour, but I have seen mantis insects over 6 inches long, and often so coloured as closely to resemble the bushes they lived on.

The mantis, though generally a pursuer, is sometimes itself pursued. A wasp called the Tachyles, one of that large group of insects possessing stings which paralyse without killing, defeat the mantis by circling round its slower-moving victim, till it can dart on to its back, sting it to helplessness, and then drag it away as food for its larvæ.

Among other flies of this group which use a paralysing sting are those master builders, the mason wasp and the mud dauber.

The mud daubers (*Scaliphron spirifex*), called Marimbondo by the natives, may be recognized by their very narrow waists and long legs, which drop and hang down when they fly, and by a curious jumping way of propulsion when walking.

Having made its earth nest, which consists of one or more tubes of clay, in some sheltered corner of a house, rock, or tree, the Marimbondo goes off to collect its young grub or larva, and drops it into the nest along with the spiders or caterpillars which it has stung and paralysed for its grub. Having provided sufficient live meat, the father dauber seals up the nest and buzzes off to new flirtations.

The young dauber larva, after feeding and growing for some weeks on its paralysed but living food, emerges one day in all the glory of the winged insect, with coat of black and gold, to love and sting and kill in its turn.

But neither the dauber nor the mason wasp, a fellow-murderer, have it all their own way, for the ruby-tailed wasp acts the cuckoo to their nests, and large flies like the Dasylus kill the mason wasp and dauber.

And in this way the scheme of nature is fulfilled—this nature which is sometimes called the kindly, but which is terribly cruel, and whose ruthless way is needful to hold the balance of warring animal and plant life.

It is difficult for a naturalist to hold views of orthodox Christianity on the benevolence, pity, and loving-kindness, the recognized attributes of the Creator of all life.

To watch, as I love watching, hour after hour, the life of such insects as ants and ant-lions, wasps and mantis, is to know that, whatever the purpose, the method of control of life and death in the animal and insect world seems one long horror of cruelty, beside which man's cruelty is trivial.

Primitive men and women are occasionally as cruel and perhaps as unintentionally cruel as animals and insects. Possibly the mantis likes its food alive because it is tender; this was certainly the reason which induced the Abyssinians to have their banquets of living ox flesh, and the Fan cannibal to cripple his prisoners by breaking their arms and legs, yet leaving them alive, to become tender by soaking in a running stream.

I only came across one variety of bee in Angola, and this to my cost had a painful sting. I happened to be stalking an animal through some shrub where these busy little insects, resenting my presence, stung me just as I was firing at a sable.

The delightful type of bee that has no sting, which I have seen in Northern Rhodesia, has not extended its gentle sway as far south as Angola.

Has any one thought of breeding stingless bees by selection, I wonder; and have they succeeded? One might go even further, as far in fact as the harassed Nile official, who, when asked if he had any biting flies existing in his district, answered that they all bit, and if the authorities would but send him a loving pair of non-biting flies, he would strive to encourage their breeding.

Hives made of cylinders of bark are placed by the natives in trees near every village, and it is wonderful how well the naked African, who collects the honey, protects himself from being stung by such a simple expedient as a wisp of smoking grass.

Though a keen collector, I saw few butterflies during the trip, and little that had not already been seen or collected in other parts of the West African coast.

Among fly caterpillars, I came across one that made a travelling house like that of the Psyche moth at home, but with far more artistic shape.

The house of this Angola caterpillar was made of fine twigs stuck together longitudinally into a tubular nest, in the middle of which he lived safe from his bird and insect enemies. As the caterpillar could protrude his head and front legs, he was able to move his house along with a series of jerks, and it was a curious experience to see a little bundle of sticks jerking along without visible motive-power.

Of disease-producing insects in Angola, by far the most important are the mosquitoes, which are more numerous in the wet than in the dry season, and in the lowlands than the higher plateaux.

All of the better-known species are present: the anophelene, or carrier of malaria, the stegomyia.

or transmitter of yellow fever, and the culex, which is accused of carrying the germ of dengue fever and the filaria of elephantiasis.

The anophelene, or malarial mosquito, which is small and neat in appearance, looks very like a fine nail or spiked seed when sitting on a wall, and in fact, though well acquainted with these insects, I on one occasion mistook some two hundred anophelenes, which had clustered in the ridge of my tent, for the dark spiked grass seed which sticks to clothing in Africa. This happened in the Loando-Coanza watershed, on the Longué River and in sable country; and any sable hunter who goes as far north as this river must take every anti-malarial precaution or be prepared to suffer from fever.

The neat-shaped anophelene breeds usually in clean and natural water sources, while the hunch-backed stegomyia and culex are content with any kind of domestic water deposit, however dirty or small.

The stegomyia and culex are almost universal in Angola, the anophelene is also widespread below 4500 feet; I personally found it at various points in the northern plateau, very numerous in parts on the Loando-Coanza watershed, and present in the lower plateaux between the central and southern Angolan railways. It was not found on the higher plateaux of Benguella and Lubango, but, though probably rare here, I would not be surprised if it was present in small numbers in the rains.

In this open undulating country it should be comparatively easy to channel the watercourses and prevent the breeding of malarial mosquitoes.

Of the tsetse flies, two varieties at least are found in Angola: the *Glossina palpalis*, or fly which conveys a trypanosome germ, the cause of sleeping sickness to human beings, and the *Glossina morsitans*, which carries an allied trypanosome and the dreaded fly disease to animals. In Rhodesia the *Glossina morsitans* has now been found to carry the sleeping sickness germs as well, and several of the varieties of Glossina flies which may yet be found in Angola can convey trypanosome disease to animals.

The whole tsetse or Glossina family are thus dangerous or suspect, and it is advisable to recognize and avoid them.

The tsetse fly is nearly twice the size of a house fly, has a short thick proboscis, wings which project beyond the body and when folded overlap like the blades of a pair of scissors. The *Glossina palpalis* is dark in colour; the *Morsitans* lighter, with indistinct grey and black bands on its abdomen.

All tsetse flies have a darting flight, appear and disappear quickly, and preferably attack moving objects. They are viviparous, depositing fully formed larvæ which turn into pupæ within an hour, though the pupa itself takes three weeks or more to become a fly.

The *Palpalis* lives near streams and lays eggs under shady trees and bushes close to the water: while the nest of the *Morsitans* is in dry forest country, usually at the feet of a large tree, often a baobab. The *Palpalis* feed largely on the crocodile, the *Morsitans* on animals.

The distribution of tsetse flies in the colony is imperfectly known, as they were not recognized as the cause of sleeping sickness when the Portuguese scientific mission in 1902 found the disease at Cabinda, Mussera, Ambriz, Loanda, Novo Redondo, and Benguella. The *Glossina palpalis* fly was subsequently found at some of these ports and along those rivers which empty into them.

The Congo River, which forms the northern boundary of a large part of Angola, is infected with the fly and sleeping sickness, and the disease is spreading up certain of its fly-haunted southern tributaries. Farther to the south there is fly and sleeping sickness along the Coanza River and some of its southern tributaries. So that it can be said that the disease is present in a great part of north Angola.

To the south the tsetse distribution is almost unknown. *Glossina morsitans* has been found near Caconda, and *G. palpalis* along the Cubal and Catumbella Rivers, and doubtfully reported as present between Benguella and Mossamedes and on the Cunene. Baum saw no tsetse on the Cubango, Cuito, or Cuando, but Boers and natives report them as present at a few points near these rivers. (The rinderpest which destroyed so much game some years ago everywhere diminished the numbers of tsetse fly.)

The central highlands of Angola, including millions of acres of bracing open country, are free from tsetse flies and should be safe from the diseases they carry.

There are two varieties of fly which painfully interest the dwellers of the lowlands of Angola; one of these I met near the Coanza River, the other I believe I saw in its upper reaches.

The *Auchmeromyia luteola*, or Congo floor maggot fly, a stout, buff-coloured vegetarian insect with a blackish abdomen, is less harmful than its dreadful name suggests; but it cannot be acquitted of guilt, because it produces, from eggs laid under native huts, a larva about half an inch long, which is a ruthless cannibal. This maggot emerges at night from crevices in the hut floor to suck the blood of any one lying upon it. The robber is sometimes caught by daylight, red-bodied from stolen blood, before he can get back to his lair below.

The Tumbu fly (*Cordylobia anthropophaga*) resembles the *Auchmeromyia* in appearance, and in being the parent of an equally offensive larva, the Tumbu maggot, which finds its way beneath the skin of the human body, where it produces a nasty boil, cured only by extracting the maggot.

I found ticks of many varieties in Angola, and know of others occurring there, which were not met in my journeys. Most of the wild animals are infected with ticks, and often with more than one variety. Some of them convey disease to domestic animals; the red water fever of cattle being caused by *Rhiphicephalus appendiculatus*, and biliary fever of dogs by *Hæmaphyllis leachi*.

The tick transmits these diseases while sucking the animal's blood, as the mosquito and tsetse transmit malaria and sleeping sickness to man. The microbes in all these diseases, being of the more highly organized and animal variety, require two hosts for their development, and pass one phase of existence in each.

In the case of the tick, it is the larval or six-legged stage of the insect which, climbing on to stalk of grass or herb, reaches its animal host, and there develops maturity and two more legs by feeding on the animal's blood.

Sometimes these ticks attack man. I was bitten in Angola, and even now, a year after, the wound gives trouble, for its beak was left in, when the tick was pulled off my finger. If I had adopted the precaution of putting turpentine or even vaseline on the tick, it would have loosened its hold and itself removed its poisonous beak.

While the ordinary tick causes man no more than such occasional discomfort, there is one variety, the *Ornithodorus moubata*, which carries a spirillum, the cause of relapsing fever, a most distressing disease. I never suffered from this complaint in Angola, where it is rare, but was infected in 1907, by the shores of Lake Banguelo, and suffered from five short but sharp attacks of a fever that caused me to be carried from the lake for hundreds of miles through Northern Rhodesia to the rail-head at Broken Hill; and twice left as dying on the road by my terrified retinue.

The Chigoe, or burrowing flea (*Sarcophylla penetrans*), is found chiefly on the Angolan coast, but occasionally in the interior. The female of this flea, about a pin's head in size, burrows into the skin, especially of the fingers and toes, to develop her eggs. She rapidly increases in size to form an irritable swelling the size of a pea.

Natives are very skilful in extracting the distended mother flea without scattering its eggs in the wound, and they should be consulted if any suspicious lumps are noticed on the toes and fingers.

There are two kinds of scorpion in Angola, one yellow and the other black; the latter is the bigger and more deadly. One black scorpion caught measured 7 inches in length, and looked like a young lobster as he walked slowly down a path.

I have been twice stung by scorpions, once very lightly on the neck and the second time deeply in the pulp of a finger. On the latter occasion, the pain, which was intense, continued for several hours, and was followed by a numbness in the whole of the arm, lasting a fortnight. Adults stung by the bigger of the black scorpions may suffer temporary but complete paralysis of their legs, and children have even died from the effects of stings.

It is well to shake out boots, slippers, and even clothes before putting them on, and if stung, to cut into the wound and rub in strong permanganate or ammonia solution as for snake bite, and place a ligature above the wound if this can be done.

Few centipedes are met, but the harmless brown millipedes, 6 to 8 inches long, were common, and their still more numerous bleached and curled-up shells showed how many had fallen victims to the annual forest fires.

CHAPTER XIX

PHYSIOGRAPHY, GEOLOGY, AND CLIMATE—HEALTH AND DISEASE

IT is not universally recognized that the greater part of Africa is well above sea-level, and usually rises from a narrow low-lying coastal belt by terraces to plateaux 2000 to 4000 feet above the sea.

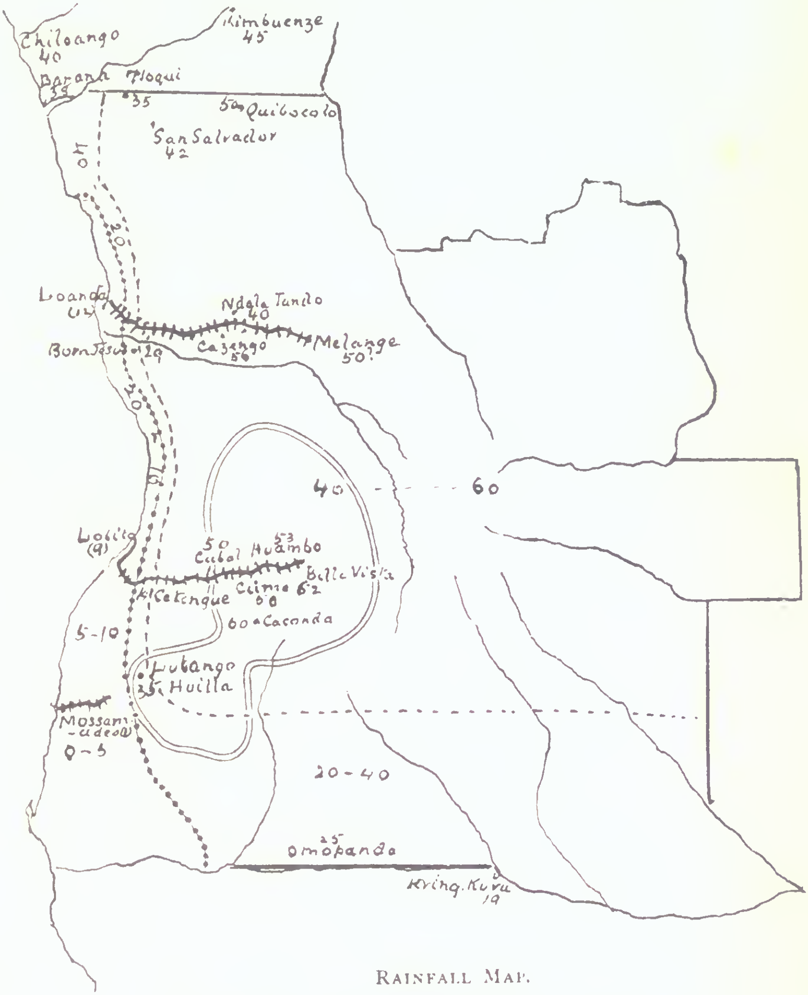
Angola shares this conformation, and its plateaux, 3000 to over 5000 feet high, form in the east the Congo-Zambezi watershed, and to the west that between the Coanza River in the north and the Cubango and Cunene in the south. From these watersheds flow many great rivers which, while within a few miles of each other at their source, are hundreds of miles apart at their estuaries, and even enter different oceans. As the slope of the land is abrupt to the west, and gradual to north-east, the east to west flowing rivers are usually small and rapid; the exceptions are the Coanza, which is navigable for steamers for only the last hundred miles of its course, and the Cunene, which disappears in the sand of the coastal desert before entering the sea.

If the economic value of the rivers seems to be limited, that of some of the harbours is undoubtedly great. The protection of Loanda harbour and Lobito Bay is derived from the silt of the Coanza and Catumbella Rivers, which has been swept many miles northwards by an Antarctic current to form the sea walls of these harbours. The very force of the current of the smaller river, which prevents navigability, provides excellent opportunity for generating electric power.

When thinking and writing in terms of its physical features and climate, it is necessary to remember that Angola covers 480,000 square miles of country, is more than five times larger than Great Britain, and ranges between thirteen degrees of latitude, from the fifth to the eighteenth south.

Geologically, Angola has a narrow belt of limestone hills parallel to the coast, succeeded by a hilly zone of the Primary rocks lying in a west to east direction, *i.e.* at right angles to the coast, rising to sandstone plateaux in the east and a sandy plain in the south-east which merges into the Kalahari desert.

Though wholly within the tropics, there are two great factors that keep portions of it subtropical: these are a cold current from the Antarctic Ocean, and the altitude of its great central plateau, 4000 to 6000 feet high. On the coast the cold sea current causes a sea mist and chilliness at Mossamedes which make the older inhabitant wear a thick coat on an October morning, what time his Portuguese cousin on the same latitude at Mozambique, on the opposite coast, may go about in his shirt. Even at Lobito


Chiloango
40
Kimbuenze
45
Banana
35
Noqui
35
50 Quibocolo
San Salvador
42
10
20
Loanda
14
Ndala Tando
40
Melange
50?
Cazengo
50
Bom Jesus 19
30
10
Lobito
(9)
50
Cubal
53
Huambo
Bella Vista
Caimo 62
60
Catengue
60 Caconda
5-10
Lubango
35 Huilla
Mossamedes (1)
0-5
40
60
20-40
25
Omopando
Kring Kuvu
19

Rainfall Map.

Coastal zone, 0–20 in three sections: 0–5, 5–10, and 10–20.
Coastal plateau and South Angola, 20–40.
Rest of Angola, 40–60.

Colonizable area ═══

Bay and Loanda the temperature is lower than at corresponding points of latitude on the east coast of Africa.

Angola, in fact, might be described from the point of view of climate, if not of geography, as subtropical rather than tropical, and a northerly extension of South Africa rather than the southern limit of the West African coast.

Some seventy years ago the great botanist Welwitsch, who had studied and catalogued the plant life of Angola, divided this colony for botanical descriptions into three zones. This division, which is used when speaking of the vegetation of Angola, is also a convenient one to make when describing the climate and geological features of the country.

The first of these zones or regions is the coastal belt, from 20 to 120 miles wide, and from sea-level to 1000 feet in height, which is largely formed of limestone hills parallel to the coast, and with a limy soil except where covered with alluvium, which has a mean temperature of 70° to 80° F.,[1] varying from 69° at Mossamedes to 85° at Cabinda, and a rainfall average of 10 inches (from 30 inches north of the Congo to 1 inch or less below Mossamedes in the south).

The second is that of the lower western woodland plateaux, with an altitude of 1000 to 2500 feet, where the crystalline rocks are a prominent feature, and the soil is richer, and has a mean temperature of 65° to 85°, and rainfall which averages 40 inches (60 inches in the north to 20 inches in the south).

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[1] These and subsequent figures give its yearly average of mean, maxima, and minima. For details, see tables, pp. 316, 317.

The third zone is that of the high plateau of 2500 to over 5000 feet, largely consisting of grassy hills and uplands with outcropping rocks and soils varying greatly in quality. The mean temperature is from 60° to 80° F. (the higher temperatures, curiously enough, occur in the southern portion of the highlands, due to hot winds from the Kalahari desert), and the average rainfall about 40 inches (50 in the north to 30 inches in the south).

To these three zones may also be added a fourth, which Welwitsch had not seen, the zone of the plateau of the far interior, with a temperature and rainfall somewhat similar to those of the second zone.

The climate, rainfall, geology, and vegetation of Angola naturally vary not only in these four zones, but also in different latitudes of each one of them. Speaking generally, it may be said that the climate is temperate to subtropical in parts of the southern coast of Angola and in the higher central and south plateaux, and that it is subtropical to tropical in the central and northern coast-lands, and in the plateaux of lower altitude, both near the coast and in the far interior.

The rainfall of the colony is lowest in the southern coastal lands—in fact, is practically absent south of Mossamedes; it is of moderate amount in the northern coast-lands and in the open higher plateau, while it is heaviest in those western plateaux of moderate altitude which lie in north and middle

Angola. The low rainfall of the southern coastal lands is due to the effect of cold ocean currents, which, by keeping the sea breezes cool and dry, prevent rainfall from the sea; whilst the coastal mountain chain prevents any moisture-laden clouds from the south-east and east passing on their rain to the coast.

It is only on the northern coast, where the current has lost its low temperature by mixing with warm ocean waters, or when the ocean wind has been warmed by contact with the western walls of the highlands, that the now warmed sea breezes can hold sufficient moisture to bring rain. For this reason the north coast-lands and the western slopes of the highlands have a comparatively heavy rainfall.

The rainfall which occurs from September to March is accompanied in Angola, as almost everywhere else in Africa, by much thunder and lightning, and is short in duration, with heavy showers. In my experience of the wet season, the rain usually came in the afternoon, the mornings being fine; the prevailing rain-bringing wind being from the east rather than the west, due partly to the fact that strong, moisture-laden winds from East Africa appear to reach even to Angola.

Important factors in the climate of Angola, to its disadvantage, are the extreme contrast between the dry and wet season, and variation of temperature between day and night; a day temperature, which would suit a tropical plant or permit the scantiest clothing on a human body, may be changed at night to low temperatures or even frost, which require protection for both plant and person.

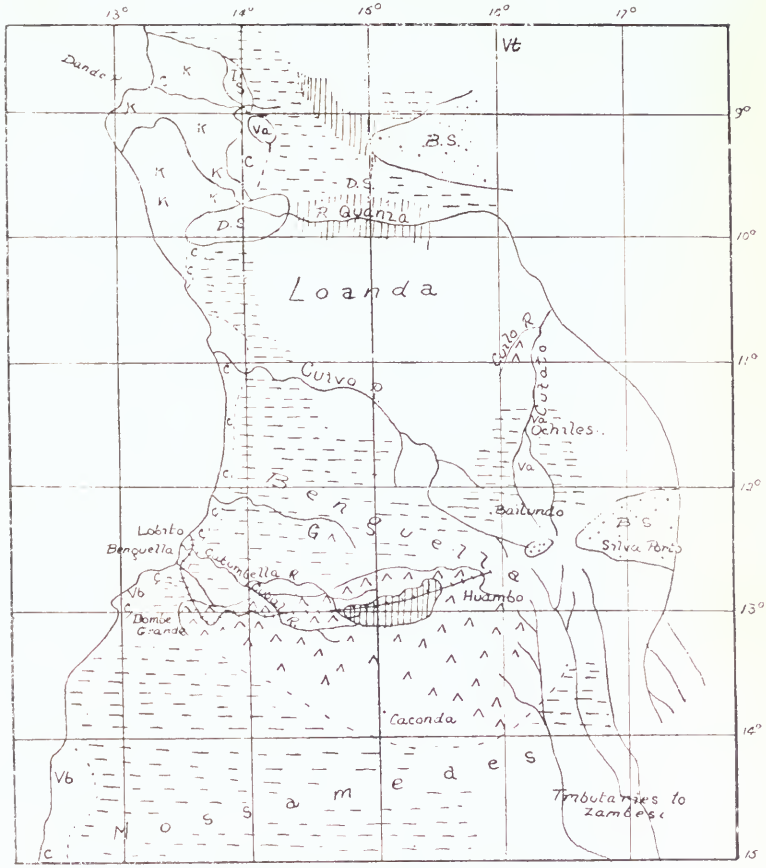
The four altitude zones of Angola, which are longitudinally placed, have been dealt with generally; the nine provinces into which the colony is divided will now be described individually from coast to interior.

North of the Congo River is the coastal district of Cabinda, which, though politically a part of Angola, is from its climate and geographical position really a portion of the lower Belgian Congo, which separates it from the rest of Angola. The geological formation on the coast, according to Marquardsen, is laterite overlying hard and chalky clays and clay-marls. Beyond this are low hills of limestone, sandstone, and Tertiary conglomerates. The zone of crystalline rocks found in other parts of Angola, if it exists, has not yet been described.

The temperature (mean of maxima and minima) ranges from 70° F. to 85° F., the yearly rainfall from 30 to 50 inches, factors which produce a moist, hot, and unhealthy climate. Even in June (winter), when I was in Cabinda, the temperature was unhealthily high; from October to April it is very trying to a European, and in the interior, deprived of the coastal sea breezes, conditions are still worse.

To the south of the Congo River is the district of that name, which extends from the coast to the Coanza River, and includes coastal, lower, and higher plateau zones. As the land rises by

THE LIMESTONE HILLS OF THE COASTAL BELT


13°
14°
15°
16°
17°
Vt
9°
10°
11°
12°
13°
14°
15
Dande
K
C
I
S
Va
B.S.
C
K
D.S.
R. Quanza
D.S.
C
Loanda
Cuvo R
Cuito R
Cutato
Va
Ochiles
Va
C
Benguella
G
Bailundo
B.S.
Silva Porto
Lobito
Benguella
Catumbella R
Vb
C
Dombe Grande
Huambo
Caconda
Vb
Mossamedes
Tributaries to Zambesi
C

GEOLOGICAL CHART OF ANGOLA

BS	Bihé Sandstone. ? Trias. Lubilash beds.	Va	Alkaline igneous rocks. Probably Kainozoic.
K K	Kainozoic.	Λ Λ	Granites intrusive in the Swazi System.
Vt	Trachyte. Probably Kainozoic.	Vb	Basalt. Probably Kainozoic.
☰	Gneiss, schist, schistose and granular quartzites. Lower Eozoic, Swazi System.	C C	Cretaceous.
▥	Oendolongo and Lepi Series in Benguella and Cuanza Series in Loanda. Lower Palaeozoic or Upper Eozoic, Transvaal System.	DS	Dombe Sandstones. ? Trias. Lualaba beds.

[From Gregory's contribution to "Geology of Benguella," lent by Royal Society of Edinbur

terraces of moderate elevation, there are not the sharp differences in climate and vegetation which occur in similar zones in central and southern Angola.

The coast hills of limestone overlie the Primary rocks, which occasionally outcrop, as in the famous pillar of Mussera. These Primary rocks become more frequent as one journeys over the first 100 miles inland, and some of the hills (1500 feet or more high) show a good deal of such formations.

Beyond this zone come the higher plateaux, like San Salvador (1700 feet, temperature 65° to 83° F., rainfall 40 inches), and Bembe (1800 feet), where there is much sandstone, a formation which continues to Zombo (3000 feet, temperature 63° to 81°, rainfall 50 inches). Mineral deposits of copper (malachite) are found in the province in the neighbourhood of Bembe.

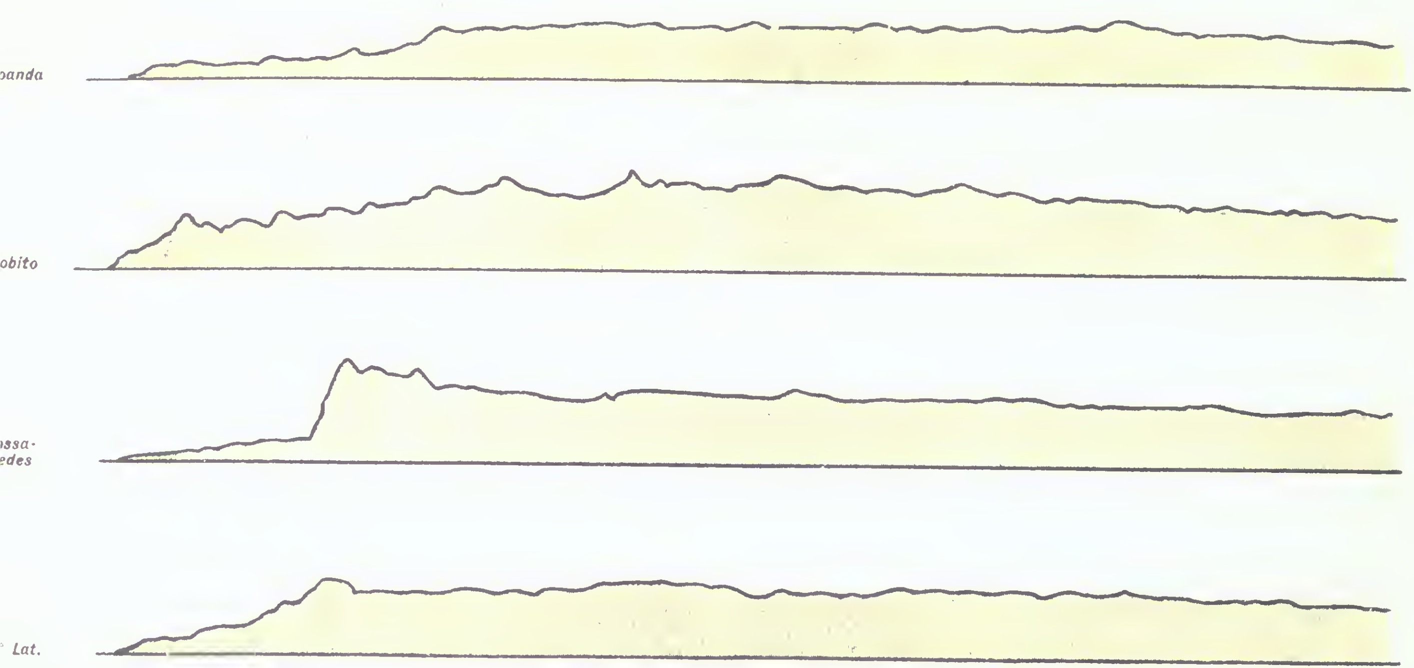
In the North Coanza district, south of that of the Congo, the coastal geological formation at Luanda town (temperature 70° to 79°, rainfall 12 inches, where Europeans can live throughout the year) is limestone, sandstone, and, farther inland, conglomerates. This zone is succeeded by that of the crystalline rocks.

The lower plateau (such as at Casengo and Galungo Alto), 1500 feet high, has a formation of gneiss, granite, and quartzite schists, though farther inland on the plateau at N'dala N'tando (2000 feet, temperature 63° to 80°, rainfall 40 inches), and especially along the basin of the Upper Zenza, the Lucalla below Duque de Braganca, and the Coanza between Pungo Andongo and Dondo, are found sandstone conglomerates and clay-slates, which, from the frequent occurrence of coal, appear to be related to the well-known South-African Karoo formation. Striking examples of conglomerate "massifs" are the steep rocky hills of Pungo Andongo, the scene of many a tribal fight, and the last stand of the Kings of Angola.

Eastward of Melanje, where the plateau rises to 3000 feet (temperature 52° to 81°, rainfall 35 inches, and a white man's country except for malaria), there begins a sandstone formation like that at Zumbo in the Congo province. The so-called hills of Tala Magongo and Muenga are probably the walls of a rift through which flows the Lui River, and the valleys of the Cuango itself may be such another rift.

The minerals occurring in North Coanza district are petroleum near the coast and the Dande River, coal, copper, and iron at Zenza de Itombi, and gypsum just north of Luanda.

In the next district, that of South Coanza, the conditions are similar to those of North Coanza, but the average temperature and rainfall slightly less. The temperature of the coastal belt, of which Novo Redondo is the main port, has an average of 70° to 80° F., and a rainfall of some 10 inches; the hinterlands of low plateaux have somewhat similar temperatures, with a drier atmosphere during the cold season, though the higher rainfall with its average of 40 inches renders the climate equally humid and more trying in the rains.



APPROXIMATE AND COMPARATIVE CONTOURS OF ANGOLA FROM THE SEA TO THE FRONTIER

Taken in the latitude of the three railways and at the 16th degree. The elevations reach a maximum of about 6500 feet, and from 2700 to over 3000 feet at the frontier.

The district of Lunda, which lies to the east of the provinces of North and South Coanza, consists geologically of a sandstone formation overlying Primary rocks which outcrop occasionally in tor and monolith. The Lunda plateau, some 3000 to 2500 feet high, slopes generally from south to north towards the Zambezi, and is intersected by its numerous tributaries which flow from north to south in somewhat parallel courses and thickly wooded valleys through a country which is mainly savannah and open forest. The climate is hot and unhealthy, the rainfall varies from 40 to 60 inches, and the country is unsuited for European settlement. The mineral resources of the Lunda province are copper, and diamonds which have been recently found in large numbers towards the Belgian border.

The district of Moxico to the south of Lunda and east of Benguella has a similar climate to that of Lunda, but slightly drier and cooler. I have no knowlege of its geological formation.

South of the Lower Coanza district is that of Benguella, the most important in the colony, as it contains the highest and healthiest plateaux and the railway which leads across them to Katanga. For the geological portion of its description I am indebted to the famous African geologist, Gregory.

The coast consists of an alluvial plain, succeeded by a narrow belt of Cretaceous hills, with occurrences of marls and conglomerates. These form the first of the terraces which rise to the high inland plateau. The temperature, 70° to

80° (extremes 50° to 90°), at the ports of Benguella, Lobito, and Catumbella, and the low rainfall (under 10 inches), is such as to render all habitable by Europeans, and one of them (Lobito), which is free of mosquitoes, even healthy.

The land rapidly rises, and at Bimbe and the Lengue Gorge (my lion camp) the Primary rocks (mainly gneiss, biotite, and hornblende) appear, and a coarse conglomerate occurs, including gneiss and granite elements.

The second plateau, about 30 miles along the railway, which here reaches a height of nearly 3000 feet, is an arid country with numerous granite outcrops, forming picturesque tors; and this waterless belt of granite, gneiss, and biotite schists continues to Catengue, 70 miles from the sea, and 1700 feet above it, with temperatures of 61° to 90° (extreme of 40° to 105°), and a rainfall of 11 inches.

Before reaching Cubal station (height 2800 feet, temperature 63° to 88°), the country becomes more wooded (rainfall 40 inches), and is suitable for agriculture, being more level and less rocky. About the 160th milestone, 12 miles beyond Ganda station (elevation 3500 feet, temperature 64° to 82°, rainfall 50 inches), a geological change occurs, and a ferruginous sandstone is met with near the Cendolongo hills, which consist of stratified rocks including sandstone, rhyolite tufts, and quartzite, overlying what are probably volcanic rocks.

The granite formation, with its picturesque outcrops, still continues till past Cuma (4500 feet, temperature 57° to 84°, rainfall 50 inches). Another geological change occurs near Lepi (5300 feet), where there is a chocolate-coloured soil (olivine dolerite), and a formation of quartzite and especially cherty greywackés.

The similarity of the geological picture along the line of the railway is due to the fact that from Lengue to near Chinguar the traveller follows the grain of the country. The plateau is a granite bed hidden by the overlying Oendolongo and Lepi formations, but which outcrops constantly, rendering the landscape picturesque with boulder and monolith.

The altitude of the plateau at Huambo (5000 feet, temperature 54° to 80°, rainfall 40 inches) and Bella Vista (5500 feet, temperature 52° to 77°) have produced a climate suitable for European settlement, and its healthiness is reflected in the complexions and physique of the numerous Boer and Portuguese settlers in these districts.

In the high central plateau there may be frost near the streams but rarely on dry ground, and the screen temperature never falls to freezing-point.

The next and most southerly districts are those of Mossamedes and Huilla, of which the former portion lies along the coast and the latter stretches east and south-east to the interior.

The coastal geological formation is marine cretaceous; sand-dunes, and occasional clay and sandstone deposits. The ports of Mossamedes and Port Alexander are cool (mean annual temperature 70°), owing to the effect of the cold Antarctic current already mentioned. The rainfall of this belt is less than an inch annually. The cool, dry climate, and an absence of malarial mosquitoes, makes this portion of Angola remarkably healthy considering its latitude in Africa.

Ten to thirty miles from the coast commences a zone of gneiss, granite, black quartzite, and mica schists; while here and there are low hills of these formations, or even monoliths, bare, smooth, sombre; in the desert, waste. This arid country is as rainless as the coast, and lacks its cool sea breezes.

A few miles farther inland rises the steep Chella range, a "massif" of gneiss, granite, and crystalline schists with occasional basalt, and with the high plateau (5000 feet) which surmounts this mountain wall commences the district of Huilla, and its chief towns, Lubango, Huilla, and Chibia, have a rainfall of some 35 inches), and temperatures of 50° to 78° at Lubango, and 54° to 82° at Huilla and Chibia; which render these climates suitable for a white colony.

The geological formation of the country is largely sandstone, red schist with some talc, dolomite limestones, clay-slates and mylaphry, all overlying the older rocks.

To the east and south of the Huilla plateau the land slopes steadily downwards, and the climate, as at Quihita and Gambos, becomes hotter. The geological formation consists of a wide band of gabbro on both sides of the Cacoluvar valley; in this gabbro are veins of granulite.

pegmatite, and aplite. The plateau continues to slope to the east towards the Zambezi in a formation of sandstone and limestone intersected by numerous alluvial river belts.

To the south the plateau stretches through arid sandy dunes and flats intersected by dry watercourses (mulolas) and hollows (marembas) till it merges into the deserts of south-west Africa and the Kalahari.

The climate in these eastern and south-eastern plateaux is hot and enervating, especially in the more wind-sheltered valleys, and owing to malarial mosquitoes is unhealthy except in the dry and cold months of the year from June to September. The mean annual temperature in the south of the colony is 75° with variations of nearly 20°, the rainfall 20 to 25 inches. In the east and south-east a somewhat similar temperature is accompanied by a heavier rainfall of 40 inches or more.

The minerals found in these provinces are sulphide of copper near Dombe, gold at Cassinga, and petroleum along the coast.

Health and Disease.—Angola may be divided from this point of view into areas which are tropical and subtropical, by latitude and climate, and others in the highlands which are temperate in spite of their latitude. There are indeed vast areas in the plateaux which have a sunny yet cool and bracing climate, more disease-free than Europe itself, if care is taken to guard against the rapid fall of temperature at night, and avoid chills.

The white man should keep at least as fit in the highlands of Benguella and Huilla as in any temperate zone, for such diseases as colds, sore throats, lung trouble, rheumatism, and most specific fevers prevalent in Europe, are conspicuous by their absence in the pure bracing air and bacteria-destroying sunshine of the Angolan highlands.

There are certain tropical diseases, however, which, everywhere present in the lowlands, may be met with in the plateaux except at the highest elevations. These are mainly due to biting insects and bad water, and both causes can usually be avoided. The chapter on insects has shown that the malarial mosquito, more numerous in the rainy season than the dry, is prevalent in Angola below 4000 feet, and occasionally above that altitude; so that only the highest portions of the central and southern plateau can be considered as malaria-free. Even in those portions of the highlands where anophelene mosquitoes can breed, it should be possible to destroy them and render the country suitable for European colonization.

The malaria of the West Coast, in contradistinction to that of East Africa and India, may usually be prevented by taking 5 grains of quinine every afternoon, using mosquito nets or mosquito-proofed rooms, and wearing mosquito boots in the evening. Personally, I use a mosquito room, which fixes into my tent, where it is possible to bathe, feed, work, and sleep in comfort and safety, after return to camp in the evening.

Attacks of fever should be treated with 10-

grain doses of quinine, up to 30 grains in the day, and 5-grain doses of phenacetin or aspirin to bring down temperature and relieve headache.

Of other insect-borne diseases, sleeping sickness may be contracted in the areas where *Glossina palpalis* is found. Up to the present there has unfortunately been no reliable cure for the disease, though hope is raised anew by a new drug, "205," and a new serum treatment. Infection may be prevented by moving quickly through fly areas, and protecting the body, hands, and face while doing so.

Relapsing fever due to the tick (*Ornithodorus moubata*) exists, but is uncommon. It can be avoided by sleeping away from villages or old camping-grounds, where the tick takes up its quarters; and the same precautions will save one from the chigoe, or burrowing flea.

Of other diseases, diarrhœa and dysentery, present in the lowlands but rare in the highlands, can be prevented by boiling drinking water, which usually conveys it. Epidemics of smallpox have swept the country from time to time, and I found the right bank of the Coanza, once a populous district, deserted from this cause.

To the hunter an important minor ailment is sore feet, which can be avoided by hardening them by practice before going on the trip, by exercise, salt or permanganate baths, and by regulating the earlier marches of the expedition and wearing well-fitting socks and boots. Blisters should be treated by soaking in permanganate solution to harden the new skin; they are best left unpricked, but if so large as likely to burst, should be drained through sound skin with a small needle—a painless process.

The nature of the layman's medicine-chest is a difficulty, but a Burroughs & Welcome or Park Davies traveller's medicine case is useful, and some drugs are invaluable. Take enough quinine (the hydrochloride salt is the best) to give every white man one 5-grain tabloid a day (for prevention); thrice this quantity as a reserve for treatment; and an equal amount for every twenty of your men who, though much more immume to malaria than Europeans, suffer from it also. Take a bottle of fifty aspirin tablets for every two months of the trip, a bottle of astringent pills, and a suitable amount of your favourite purgative.

I do not encourage my carriers to like drugs. The African has a vicious taste in these matters; they delight in any medicinal concoction, and your medicine chest need not be normally raided, as there are many suitable drugs which the natives know and use. The most concentrated purgative is croton oil, an urgent stimulus even to the African's interior, in drop doses. There are times when the white man must indeed be the physician and saver of his black brother—in snake bite, wounds, injuries, and drowning.

The venom of mambas and cobras acts quickly on the nervous system, causing drowsiness, vomiting, paralysis, and death; that of the adder acts more slowly, clotting the blood and damaging the blood vessels, but recovery is equally slow.

The remedy for snake bite is first a ligature above the bite, then incision and rubbing of the wound with permanganate powder, with venine injections, finally coffee or brandy as heart stimulants.

A native will recover from the most terrible wounds unless they have been rendered septic (poisoned) by the claws of a lion or leopard, when their thorough washing out - with antiseptics like perchloride of mercury (1 in 2000 or one tablet in 2 pints of water) or permanganate solution—may cure the condition. A few compressed bandages and dressings are absolutely necessary in the equipment. To treat broken bones, dislocations, or save an apparently drowned man, means knowledge which can and should be acquired by a man who deliberately isolates himself. Morphia in tabloids and a hypodermic syringe every man should carry and know how to use. After having been twice mauled (fortunately lightly), I know the blessing of this enemy of pain. There is one drug I always carry also—quick in its work, and kindly withal with its deadly power. I have often discussed with my parson friends the justification of its use; most of the humane ones agree that when suffering has become unbearable, and there is absolutely no hope, one may dare to take it and yet be forgiven. It is said of the big-game hunter that if he persists in hunting dangerous game and takes full risks, there can be but one end; but why should it entail needless suffering?

SOME TEMPERATURE READINGS IN ANGOLA

Districts.	Stations.	Description.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Average.
Cabinda.	Chinchoxo	Min. average	71·9	73·4	72·5	72·7	70·3	67·1	65·3	67·0	70·1	72·5	73·9	73·0	70·8
		Max.	83·0	86·0	85·2	85·0	82·8	73·8	77·6	77·2	79·2	82·8	87·9	85·2	82·4
	Chiloango (sea-level)	Min.	70·1	71·6	71·2	70·6	66·6	65·0	59·8	63·0	61·7	68·0	68·0	69·4	67·1
		Max.	86·7	85·6	87·0	87·0	84·2	78·4	79·1	77·0	78·2	83·3	84·7	85·0	85·1
Congo.	S. Salvador (1[illegible] ft.)	Min.	66·2	67·1	66·9	67·1	65·4	58·0	58·7	59·0	61·7	65·3	66·8	66·3	64·4
		Max.	85·0	86·9	87·6	86·7	85·0	80·9	79·1	79·2	79·7	85·0	84·2	83·5	83·1
	Qui[illegible]	Min.	66·0	67·3	66·8	66·8	66·6	61·2	57·7	57·5	61·7	65·0	65·3	65·8	64·0
		Max.	83·3	80·5	[illegible]	86·0	85·4	87·9	79·4	81·2	83·4	85·6	84·2	84·2	84·6
Cuanza.	Loanda (sea-level)	Min.	[illegible]	74·1	74·3	72·0	66·8	63·1	63·0	63·8	66·9	70·1	72·8	72·8	70·0
		Max.	81·3	[illegible]	84·2	83·0	80·6	75·6	72·7	72·7	74·6	77·7	80·6	81·4	79·3
	N'dalla N'tando (2400 ft.)	Min.	[illegible]	66·2	65·3	66·2	64·0	59·0	57·9	57·7	60·0	63·0	64·4	64·7	63·[illegible]
		Max.	79·3	[illegible]	81·2	81·3	85·0	79·1	77·9	75·9	77·4	[illegible]	79·4	79·0	79·4
	Malanje ([illegible] ft.)	Min.	[illegible]	60·0	62·8	60·2	[illegible]	66·4	57·8	56·2	60·2	61·8	62·0	62·8	52·7
		Max.	64·7	81·3	81·8	81·0	81·4	81·3	79·[illegible]	81·0	82·7	82·1	81·0	80·6	81·2
Mossamedes.	Mossamedes (sea-level)	Mean of Max. and Min. Av.	72·0	76·0	73·0	73·0	74·0	67·0	64·0	63·0	66·0	66·0	71·0	70·3	70·0
Huilla.	Lubango (5100 ft.)	Min. average	54·3	55·4	56·3	54·0	46·4	42·0	40·8	45·3	52·7	54·0	55·2	56·3	50·6
		Max.	81·2	77·0	78·2	76·6	75·9	75·6	74·0	78·3	81·8	83·5	78·5	77·4	78·6
	Huilla (5100 ft.)	Min.	60·2	60·0	60·7	56·8	49·4	41·8	42·5	47·0	55·0	59·0	60·2	60·2	54·9
		Max.	85·0	80·9	80·6	81·0	81·0	80·9	84·2	88·4	89·0	89·0	82·7	[illegible]	82·8
S. Frontier.	Olukonda (3300 ft.) S.W. Africa	Mean of Max. and Min. Av.	77·0	75·5	74·0	73·3	61·7	60·3	68·5	76·0	77·9	79·7	77·6	72·5	72·5
	Kuring-Kuru (3400 ft.)	Mean of Max. and Min. Av.	78·0	76·0	72·0	70·5	64·5	56·0	64·5	70·5	77·8	77·6	77·8	69·2	70·2
Benguella.	Lobito Km. 0 (sea-level)	Min. Ext.	68·0	70·8	70·0	70·0	61·8	63·8	59·9	59·9	60·9	66·9	68·9	71·9	66·9
		Min. Av.	71·2	73·2	73·7	71·3	65·5	64·2	63·0	62·2	65·4	70·5	72·8	74·5	69·3
		Max. Ext.	82·8	[illegible]	90·0	88·3	86·9	77·0	79·9	74·0	77·0	82·9	83·3	85·8	83·4
		Max. Av.	85·4	82·2	80·5	86·7	81·3	75·1	74·0	70·0	73·6	78·9	80·7	84·0	79·5
	Benguella Km. 36 (sea-level)	Min. Ext.	[illegible]	72·0	68·9	66·9	58·0	50·8	51·9	54·0	60·9	71·9	70·0	71·9	64·3
		Min. Av.	71·0	73·7	72·3	71·3	62·9	[illegible]2·2	59·5	59·7	65·0	73·2	73·2	75·3	68·4
		Max. Ext.	[illegible]	80·9	86·0	75·4	77·0	77·9	74·8	74·0	80·9	79·9	82·9	83·8	79·6
		Max. Av.	76·0	73·4	81·7	74·5	73·6	73·7	72·3	69·6	74·6	77·9	7[illegible]·0	7[illegible]·6	75·7
	Catengue Km. 1[illegible]2 (17[illegible] ft.)	Min. Ext.	62·0	58·0	50·9	62·9	50·9	50·0	42·9	42·9	56·8	61·8	59·9	59·0	55·7
		Min. Av.	67·1	67·3	[illegible]	68·0	58·1	52·7	50·7	52·7	69·6	69·4	69·4	70·0	61·2
		Max. Ext.	[illegible]	101	105	102	101	99·8	94·0	99·8	94·0	99·8	99·0	115	100
		Max. Av.	92·3	92·5	94·8	95·0	99·0	90·8	82·5	[illegible]	84·7	92·6	92·2	93·1	90·6
	Cubal Km. 1[illegible]7 (2800 ft.)	Min. Ext.	55·0	59·9	[illegible]	[illegible]	59·9	42·9	[illegible]	60·9	[illegible]	59·9	58·0	54·0	55·9
		Min. Av.	61·5	62·2	63·5	63·6	61·0	53·4	65·4	65·4	64·2	65·3	61·7	60·4	62·9
		Max. Ext.	97·3	92·3	107	103	101	99·0	[illegible]	107	95·9	99·0	95·9	88·8	99·8
		Max. Av.	86·5	84·7	88·6	97·0	86·3	76·0	94·2	94·4	93·5	96·4	85·1	82·0	88·2
	Ganda Km. 253 (3500 ft.)	Min. Ext.	64·9	59·0	63·8	61·3	51·5	51·9	56·0	58·0	59·0	60·9	61·3	61·8	59·1
		Min. Av.	68·0	64·9	65·7	66·3	57·4	60·0	61·8	65·1	62·2	68·5	69·4	66·1	64·8
		Max. Ext.	90·0	92·0	94·0	81·8	81·8	84·5	88·8	88·0	90·0	92·8	90·8	[illegible]	88·8
		Max. Av.	84·7	84·9	84·5	72·6	69·4	73·4	82·5	83·3	81·0	87·4	85·0	80·0	81·8
	Cuma Km. 317 (4500 ft.)	Min. Ext.	58·0	59·0	59·0	59·0	47·3	44·9	50·0	50·0	54·0	58·0	59·0	59·0	54·9
		Min. Av.	59·7	61·2	[illegible]	61·3	52·1	49·6	[illegible]	54·0	59·0	59·7	63·1	61·1	57·1
		Max. Ext.	90·8	85·8	90·0	86·9	86·0	79·9	79·9	82·7	90·0	90·8	90·8	88·0	87·5
		Max. Av.	89·3	84·9	86·7	84·5	79·7	76·8	77·9	88·0	87·4	[illegible]	87·4	85·4	84·3
	Huambo Km. 426 (5100 ft.)	Min. Ext.	50·0	47·5	44·9	44·9	39·9	44·7	48·9	47·8	48·9	58·0	59·0	59·9	49·6
		Min. Av.	55·9	52·0	50·9	52·3	43·3	51·9	51·6	51·6	52·8	62·7	61·5	[illegible]	54·1
		Max. Ext.	92·0	97·8	99·5	[illegible]	101	91·2	90·0	[illegible]	[illegible]	92·8	84·9	78·4	94·0
		Max. Av.	79·7	84·5	83·8	92·5	94·0	82·8	82·9	84·5	85·4	[illegible]	76·4	[illegible]	81·2
	Bella Vista Km. [illegible]92 ([illegible] ft.)	Min. Ext.	[illegible]	[illegible]	55·0	50·0	40·9	46·9	46·9	43·8	50·9	54·0	56·8	56·0	52·5
		Min. Av.	[illegible]	58·3	59·9	58·3	51·4	49·2	50·0	40·3	57·1	58·1	55·4	59·1	53·1
		Max. Ext.	[illegible]	85·8	[illegible]	[illegible]	78·4	75·4	86·0	[illegible]	88·8	88·0	81·8	81·8	83·7
		Max. Av.	78·8	76·2	75·6	77·5	74·0	67·8	73·2	79·5	82·2	81·3	76·6	78·0	76·9
	C[illegible] (1500 ft.)	Min. average	[illegible]7·6	57·2	61·4	64·0	64·0	59·0	58·1	56·8	58·9	64·1	65·3	58·7	61·0
		Max.	74·6	74·2	74·0	72·5	70·5	69·2	70·2	73·8	76·3	74·2	75·2	71·0	72·7

RAINFALL BY DISTRICTS AND STATIONS IN MILLIMETRES, WITH TOTAL ALSO IN INCHES.

Districts.	Stations.	Years Observation.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.	Total in Inches.
Cabinda.	Chinchoxo .	2	0	6	8	24	222	52	189	120	185	70	54	0	930	37
	Chiloango .	..	0	1	16	9	86	136	224	166	250	125	34	0	1047	42
Congo.	Noqui . .	1	0	0	75	13	40	30	90	74	277	50	222	0	871	35
	S. Salvador .	5	0	2	2	56	203	108	96	98	108	243	60	4	1075	42
	Quilocolo .	2	0	18	16	192	182	122	162	133	126	296	138	0	1385	55
N. Coanza.	Loanda . .	26	0	0	1	5	26	18	28	37	51	120	10	0	296	12
	Bom Jesus .	1	0	0	0	0	3	30	208	83	86	330	2	0	747	29
	Cazengo . .	2	0	1	8	176	(?)	273	132	131	203	254	17	0	1400	56
	N'dalaN'tando	2	0	0	5	108	137	160	96	98	146	240	7	0	997	40
	Melanje . .	2	0	12	(?)	52	94	107	71	117	171	171	2	0	1860 1400	44
Benguella.	Lobito . .	4	0	0	2	4	10	43	27	7	84	55	1	0	233	9
	Benguella .	3	0	0	0	1	12	84	13	37	96	40	0	0	333	13
	Corotava .	1	0	0	0	7	51	217	11	0	8	10	0	0	310	12
	Catengue .	0	2	2	15	90	120	33	24	104	61	3	0	0	351	14
	Cubal . .	5	0	0	0	94	246	255	96	148	158	169	89	0	1275	59
	Cuma . . .	4	0	0	34	117	259	310	133	134	158	41	9	0	1165	47
	Huambo . .	2	0	1	88	203	117	365	229	263	191	66	0	0	1523 1112	52
	Bella Vista .	2	0	10	51	281	464	451	221	126	144	57	0	0	1805 (1914) 1335 (1918)	62 (av. of 2 yrs.)
	Caconda . .	2	0	0	45	118	192	241	204	236	275	210	12	0	1533	61
Mossamedes.	Mossamedes	..	0	0	0	3	0	5	0	0	0	14	0	0	22	1
Huilla.	Lubango. .	..	0	0	12	46	138	151	95	105	163	151	13	0	880	35
	Ompanda .	..	0	0	11	5	43	141	121	160	80	56	6	1	624	29
	Kuring-Kuru (near Cuangai)	..	1	0	0	4	29	55	160	121	75	29	0	1	481	19

RELATIVE HUMIDITY.

Stations.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Chinchoxo . .	86	85	83	84	86	86	85	86	83	83	83	82	84
Chiloango . .	83	83	81	83	87	87	85	84	84	83	84	87	84
S. Salvador .	76	76	75	81	82	78	74	70	70	74	79	80	76
Loanda . . .	82·5	80·2	82·0	84·4	85·1	84·5	84·2	85·3	83·8	82·7	82·6	83·9	83·5
N'dala N'tando	80	73	80	84	74	68	77	73	79	79	80	84	78
Melanje. . .	80	83	84	83	74	65	66	64	72	83	83	83	77
Caconda . .	86	84	84	75	66	65	71	63	74	76	81	84	76
Lubango . .	48	56	62	60	40	32	34	28	32	39	62	60	46
Kuring-Kuru	54	66	70	62	45	47	50	43	27	36	50	56	50

RAINY DAYS.

Chinchoxo . .	7	7	10	8	9	..	..	..	..	0·5	8	3	52
S. Salvador .	10	12	[illegible]	13	12	..	..	1	2	8	14	11	96
Loanda . . .	1·8	2·4	[illegible]	9·2	1·2	.	.	0·1	0·4	0·7	2·3	2·3	27
N'dala N'tando	3	4	3	6	.	..	..	..	..	6	6	6	42
Melanje. . .	17	16	16	13	1	.	..	3	14	19	17	9	134
Caconda . .	.	2	6	12		.	.	1	3	9	12	10	66
Ompanda . .	13	11	11	4	0·5	0·5	0·5	..	2	4	7	14	67

CHAPTER XX

LAND AND SOILS—STOCK AND PRODUCE OF NATIVE FARM AND EUROPEAN SETTLEMENT

IF the reader remembers what was said in the last chapter,—of the conformation of Angola, of its plateaux rising by terraces from the sea, and of its division into zones,—he will realize that the coastal zone and that of the lower plateaux have neither a climate, soil, or rainfall suitable for European produce, while the presence of tsetse in the second zone prevents the raising of stock. Beyond these zones, however, there are great areas of highlands which are eminently suitable, yet empty; for if the three million natives of Angola cultivate but one-hundredth of its surface, in the 12,000,000 acres of the highlands, the percentage under the plough is even less. This immense highland area, over 4000 feet above the sea, with a mean temperature of 70° F., ranging from 85° to 55°, and an average rainfall of 40 to 50 inches, comprises—(1) The highlands of Bailundo and Bihé, including Bailundo, Qiaka, Huambo, and Sambo, 6,000,000 acres. (2) The Caconda highlands, comprising Quitata, Upper Hanha, Quingola, Caconda, Que, and Quepongo (of Hanha), 3,500,000 acres. (3) The highlands of Lubango, Huilla, and Chibia, 2,500,000 acres.

Of these regions (1) and (3) are accessible by railways, (2) by car and wagon in certain places, by carriers in others; but railways are being extended and roads rapidly constructed, so that this inaccessibility should get steadily less.

The roads are usually not good, and transport by motor is best made with light box-cars and lorries with a good clearance. The wagon in Angola is of the South African type: a heavy four-wheeled vehicle drawn by eight or ten span of oxen, which carries a weight of 1½ to 2 tons even on bad roads. When carriers are used, this amount would be transported by sixty to eighty men, who move faster than the wagons and are a somewhat cheaper form of transport.

Of the vast tracks of arable land, perhaps two-fifths is capable of irrigation, but the country is less suitable for large irrigation schemes than those of medium and smaller extent.

In the Benguella highlands especially, of which more is known than elsewhere owing to the reports of Gregory and Taruffi, there are a great number of clear springs, due to the permeability of the soil, which acts like a sponge during the rains, and yields its stored water in the dry season.

The land surface of the Benguella plateau varies from deep soils to thin patchy ones with outcropping rock, while here and there the *Brachystegia tamarindoides* (N'goti), a small herb with thick, interlacing roots, stops all ploughing, and on the Bulu Vulu grasslands the soil is black, poor, and easily exhausted.

Gregory finds that many of the soils of the plateau are derived from granite, which gives rise to a light, easily-worked soil, often rich in potash, but generally poor in lime; others, due to sandstone, which is a granite débris without plant food, he finds are still poorer; while the quartzite gives barren silicious soils, unless they contain felspathic layers which enrich them.

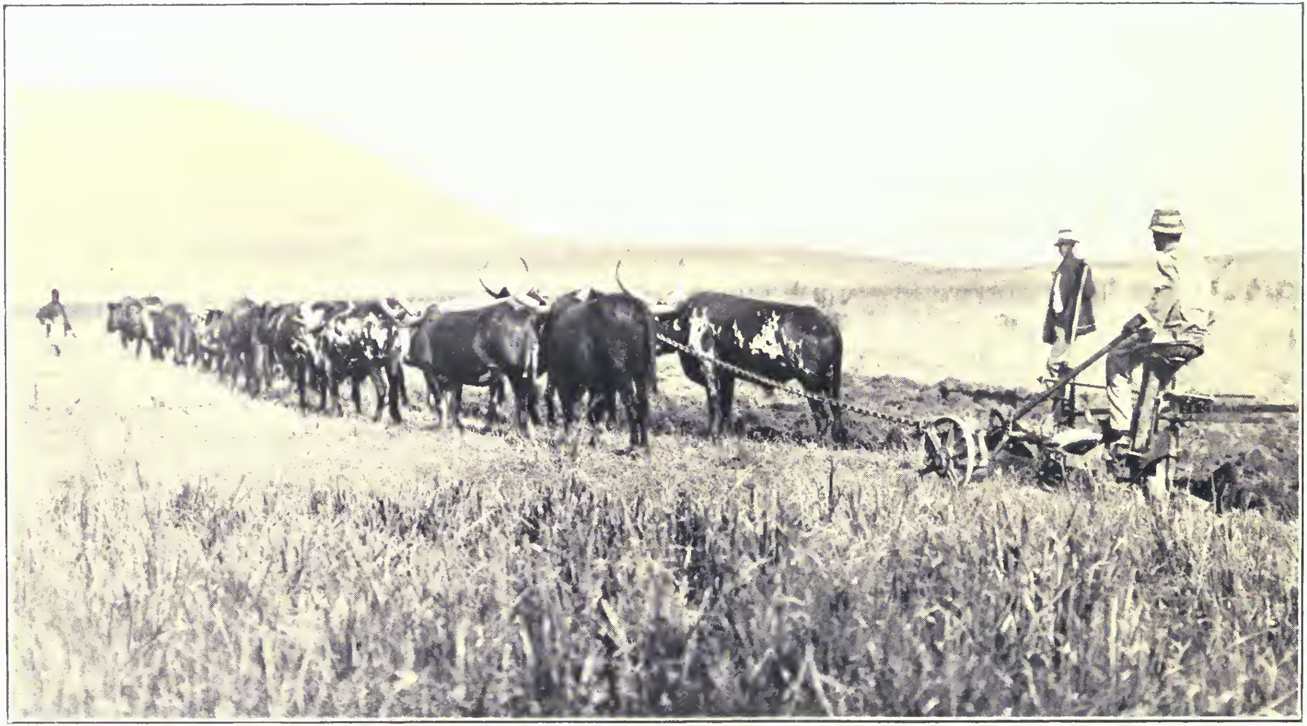
The soils of the gneiss rocks, rich in lime and basic minerals, are found in the north and north-west of Bailundo, while the fertile red or chocolate-brown soils, produced from the igneous basic rocks, are to the north and north-east of that town, at Ochilesa, Chieuca, etc. With these richer soils of the northern slopes of the plateau are associated better prospects of irrigation from the deeper and faster-flowing northern rivers than from the shallow sluggish streams in the southern slopes of the plateau. It was the northern slope of the Benguella plateau which Gregory recommended for European colonization.

The gentle slopes of these highlands, with their deep soils where the rock outcrops but rarely, and is generally covered to a depth of 6 to 10 feet, make ploughing easy and renders tractor tillage specially suitable, except where the N'goti vine is present.

While Gregory does not regard the soil of the Benguella highlands as of extreme fertility, most of those examined by him and others, from the Bailundo and Caconda districts, have a good reserve of plant food, and would improve with competent cultivation. Lime is deficient from

BRITISH SETTLERS

AND THEIR FARM



PLOUGHING IN THE BENGUELLA HIGHLANDS

some of the soil, but could be readily added. The soils are also at present unfavourably affected by the annual burning of grass, which drives off the nitrogenous constituents and disproportionately increases the mineral.

Professor Taruffi came to the conclusion, from his analysis of fifteen soils from different parts of the Benguella and Caconda highlands, that these were deficient in limestone but fairly well supplied with phosphoric anhydride, rich in potash, and containing a varying but generally high proportion of organic matter and nitrogen. He comes to the conclusion that the soil of the uplands is fit for cereals and vegetables, especially tuber plants and potatoes.

The opinion seems on the whole favourable to the agricultural value of the soils of large areas of the Angolan highlands, if these are protected from repeated grass burnings and enriched in some places with readily obtained limestone and other manure.

This critical account of the soils of the plateaux, based on the report of two independent observers of great repute, should encourage a prospective European settler, who is prepared to take up a holding of at least 12,000 acres, and to use mechanical methods. At present, small isolated holdings are not suitable for the English settler in Angola.

By the Portuguese colonial land laws the native is decreed a usufructor, and the Government as possessor of all lands in Angola can dispose of them as it will.

In early days in Angola settlers took possessiom of any land they pleased without troubling to secure titles, which were more difficult to regularize then than to-day, when an attempt is being made to help the settler.

But the Government has not even yet thoroughly surveyed the land. Concessions granted before the land laws of 1911 were given frequently on wrong descriptive titles, and this fact, together with the large amount of unoccupied land bordering on estates, has led to a surreptitious annexation of rich unallotted land. Since 1911 intending settlers are compelled to peg out, roughly survey, and describe the land before preferring a claim ; and no concession is ratified until a complete survey has been carried out by a Government surveyor.

The detailed conditions of land tenure, for which I am indebted to the Zambezia Exploring Company, are as follows :

1. All applications must be made to the Governor-General.

2. No one person can obtain more than a total of 50,000 hectares (125,000 acres) on one or more blocks, but two or more tenants can associate themselves and join up with their blocks.

3. The yearly lease payable for any quantity of land taken up is $0·03 per hectare (2½ acres), or less than halfpenny per acre per annum.

4. Immediately the intending settler taks up his land a conditional title is granted to him for a maximum period of ten years.

5. During these ten years the tenant is obliged—

(*a*) To spend on his area of land a sum equivalent to 200 times the yearly lease, namely, for 12,500 acres an amount of 30,000 dollars would have to be expended.[1] This amount can be spent in cattle stock, agricultural machinery, implements, houses, seed, etc., in fact, anything connected with the development of the land.

(*b*) To have a complete survey made of the land the settler wishes to take up and for which conditional title has already been obtained, and lodge these survey plans with the Government.

6. As soon as these two conditions are complied with, the tenant has a right to definite title at once and will receive it.

7. Should the tenant fail to fulfil the last two mentioned conditions the conditional title he has received will be annulled, but as certain expenditure will have been incurred during the ten years mentioned above, a proportionate part of the grant of land will be maintained and a definite title will be given in respect of it, providing, of course, that the survey plans referred to above are lodged with the Government.

8. When the definite title has been obtained

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[1] As the value of the escudo changes so constantly, English equivalents will not be given

to his land the tenant may obtain freehold possession of it on payment of a lump sum equal to twenty times the yearly lease, namely, for an area of 5000 hectares freehold possession may be obtained on payment of $\$0{\cdot}03 \times 5000 \times 20$, or $3000.

9. Transfer of conditional title may be had, with the consent of the Governor-General.

10. The first transfer of land may be made without any fee, but on any subsequent transfer the ordinary fees in force in the colony must be paid. The value of the land concession on which land tax operates is fixed at twenty times the yearly lease. There are no ordinary land taxes in force in Angola at the present moment, but the following special tax has to be paid :

11. During the first year of the conditional concession no land tax has to be paid. In the second year, if an amount less than two hundred times the yearly lease has been expended in connection with the land, 5 per cent. of the value of the land concession will be paid as land tax. In the third year, if the above-mentioned amount has not been expended on the land, 10 per cent. of the value of the land concession has to be paid as land tax, and each successive year up to the tenth year that the stipulated amount has not been expended, the amount to be paid as land tax will increase automatically by 10 per cent. until the amount referred to above has been expended on the land. For instance, for a concession of 5000 hectares, if the tenant has not expended the stipulated sum during the first six years of the

ten years' conditional title, he will be liable to the following land tax :

First	year						Nil.
Second	year,	5 %	of $3000	value of	$150	land	concession.
Third	,,	10 %	,,	,,	$300	,,	,,
Fourth	,,	20 %	,,	,,	$600	,,	,,
Fifth	,,	30 %	,,	,,	$900	,,	,,
Sixth	,,	40 %	,,	,,	$1200	,,	,,

If, on the other hand, the stipulated amount of $3000 is expended on the tenant's land by the end of the second year, no tax is paid.

12. During the first ten years after the above stipulated amount has been expended on the land concession no land tax will be paid. After ten years of non-payment of land tax the ordinary land tax in force in the colony must be paid yearly.

The above-mentioned terms show that it is to the tenant's interest to complete as quickly as possible the expenditure on the land of the amount of 200 times the yearly lease.

13. The application made to the Governor-General to obtain one or more blocks of land must be accompanied by the following documents :

(*a*) Certificates of a bank or banks, by which it is shown that the intending tenant has sufficient money or credit to meet the necessary expenditure on the land.

(*b*) Certificate of the Treasurer of the Colony, by which it is shown the intending tenant has paid into the Treasury the sum of

$200 for each area of 5000 hectares of land he wishes to take up. A larger or smaller sum will have to be deposited according to the number of acres the prospective tenant wishes to take up.

(*c*) If the intending tenant is a foreigner, he must make a declaration submitting himself to the Land Tenure Laws in force in the Colony.

(*d*) The intending tenant must make a simple descriptive sketch of the areas of land he wishes to take up, giving approximately their position and boundaries.

14. The deposit of $200 for each 5000-hectare block of land will be taken into account in the payment of the yearly lease, and if the land concession is not granted will be refunded.

The houses of the Portuguese farmers and traders I saw consisted usually of but three or four rooms, and were built of a framework of forest poles filled in with plastered mud, called " pau-a-pique " by the Portuguese. These houses have roofs of thatch or corrugated iron.

A better though less common method of building is by using " adobos," or blocks of clay which have been moulded and then dried in the sun. Good material for bricks can be obtained from ant-hills, as the secretion of the ants gives this earth a remarkable consistency, and kilned bricks of excellent quality can be easily obtained from ant-hill earth.

The want of a reliable and plentiful source of labour is the main difficulty of the Portuguese in central and south Angola ; as with a population of only three millions in 480,000 square miles, the country is much under-populated; and there are probably not more than 100,000 people on the Benguella highlands, and about the same number on the uplands of Caconda and Huilla. Even the local system of compulsory labour cannot supply requirements, and the recruitment of labour for San Thomé and Principe, and for railroad construction, have decreased available numbers and increased wages. In 1920 a native labourer could command 15 escudos a month, an amount which means the equivalent of £3 to a Portuguese farmer, though it represents only a few shillings in British currency and should be readily afforded by the British settler. Even at this wage, labour was difficult to obtain, especially near the big towns and the southern districts, like Benguella and Mossamedes.

A company which has taken up large tracks of land in Angola and is prepared to help others with information, advises British settlers to join and take farms in a large block, when they could be more prosperous by forming a co-operative society, and more contented from the benefit of their own.

Stock.—Though Angola has so many of the characteristics of a cattle country, the number of its stock is not commensurate with these advantages, or its area. One reason for this, now happily past, was the destruction of cattle in intertribal wars and at the death ceremonies of Chiefs, when domestic animals as well as human beings were sacrificed for the burial feast, and as food for the spirit of the dead Chief. The other reason, which may equally be banished also, if the remarkable new treatment by a German drug called "205" and new English methods of serum treatment prove a success, is the distribution of tsetse fly disease. This scourge, which infects north Angola along the Congo and Coanza Rivers and their tributaries, and parts of eastern and south-eastern Angola, limits the best cattle country to well-watered portions of central and southern angola.

Cattle.—In the districts of Cabinda, Congo, and Lunda there are few cattle; in North Coanza district, except near Luanda itself, I did not see many cattle in my journey to Melanje, as the route followed the Coanza valley where the tsetse fly is present. More cattle were met in my journey through the interior of South Coanza province, to the east of the river and to the west of it as far as Bihé, but the fly along the Coanza limits their distribution and numbers.

On the Benguella plateau from Bihé westwards, more cattle were seen, and there was stock in the farms along the Benguella Railway till another fly belt near the Cubal and Catumbella Rivers was reached. In the well-watered highlands to the north of this railway there are several cattle farms; among them one with a large stock of splendid cattle belonging to the Zambezia

Exploring Company, where winter fodder is employed in feeding, and crops for fodder had been grown. The greatest number of cattle was met with in Benguella on my journey south from Catengue to Lubango, in the Quillenges district of Benguella district, or in the plateau round Lubango (Huilla district), and from this town westwards along the Southern Angola Railway (Mossamedes district) till the desert country was reached. There are two breeds of cattle, the "Quillenges" and "Selles," which come from their respective districts. A third race, the "Yenges" cattle, which came originally from Barotseland, have longer horns and are used as riding oxen.

The cattle are small but well-shaped, weighing from 300 to 400 lb. Their usual colour is a patchy black and white, or red and white, more rarely pure black, red, or white. The native cattle graze and are corralled in the open, and no winter forage is ever prepared. One of the difficulties in Angola has been the mixture of poisonous plants with grass in some grazing lands, but the growing of forage should get rid of the difficulty. Cattle suffer from few diseases in Angola, one of them is an infectious peri-pneumonia ("Caonha" of the Portuguese), which is more prevalent on the coast than in the plateau region; another is a skin disease called "Sarha." These diseases, once started, spread rapidly in native herds, owing to lack of precaution. Vaccination has been used as a remedy with some measure of success. The natives breed cattle apparently to gain not only money but prestige; the ownership of a large herd carrying the same social weight as a brougham would once have done, or a Rolls-Royce car does to-day. Little milking and no butter-making is done by the natives, nor do they eat much beef themselves. Cattle fetch from 50 escudos a head in the interior, and three times this price at the ports. In the European farms, cattle breeding is carried out by crossing selected European bulls with the local cows, and the cattle are bred for milk and butter as well as for beef.

Horses.—There are few horses in Angola, and these are owned chiefly by the Boers, who use them as shooting ponies. Tsetse fly and horse sickness are the chief difficulties to horse-breeding in the colony.

Goats are to be seen in nearly every village, even in the fly zone, and these animals appear more resistant than most others to the tsetse. They are very prolific, a virtue which they apparently have possessed for centuries, from the accounts of Cavazzi, Dapper, Hakluyt, and other older historians.

Sheep.—The Angolan sheep have no wool, but a coat of bristly hair instead. They are very leggy and generally thin. The fat-tailed variety of sheep is represented in the colony.

Pigs.—The biggest pig I ever saw in my life was in a farm near the sable country. It was a cross between a Portuguese black pig and the local race, which is itself big. Pigs, which breed well in Angola, appear to be immune to most of the local animal diseases, and there should be a future for pig-breeding in this colony.

Fowls of a small, skinny local breed, and Muscovy ducks are to be seen in most villages. They are kept for food, as African natives practically never eat eggs.

Farm Produce.—Near the village are fields of mandioc, ground-nuts, sweet potatoes, maize, millet, and beans, and in the hot northern coastal lands, rice and sugar-cane. Each family cultivates a few acres, the ground being first cleared by burning and then manured with the ashes of the burnt trees and grass. The tilling and hoeing is very superficially done with a heart-shaped mattock on a V-shaped handle, and after two or three sowings the land is considered exhausted, and abandoned for a new plot.

In order to get a continuity of crops, uplands are chosen for cultivation just before the rainy weather, and valleys near streams during the dry season; while, to save labour and still obtain a variety of produce, two kinds of crops are often mixed, one being sown in the furrows, the other in the ridges or mounds between them. Thus maize and beans are usually sown together, and mandioc with sweet potatoes or ground-nuts.

Except mealies, few of the above plants are cultivated by the European settlers, who appear unfortunately to favour wheat, butter beans, peas, flax, and hemp, to the exclusion of the hardier, easily-raised, indigenous produce. The economic plants are mentioned in the order in which I met them in 1920 when travelling through the country.

The mandioc (*Manihot utilissima*), originating from Brazil, but widely distributed in Africa, is a bush 5 to 8 feet high, with knotty brittle branches and dark green palmated leaves; which grows readily in a dry soil from cuttings placed in ridges or mounds of earth. The root, from 6 inches to 2 feet long, covered with a dark, easily detachable skin, but white inside, attains maturity in eighteen months, but can be eaten earlier or later, and I have more than once solved an urgent supply question by meeting abandoned fields of this plant. Indigestible when eaten fresh, it is better tolerated by Europeans in preparations made from the flour (fuba), which makes indifferent bread and a poor substitute for mashed potatoes with milk and butter, but a tolerable sauce when mixed with lime juice. The natives ferment this root both for beer and preparatory to drying it and before grinding it into flour, which is either eaten as porridge (infundi) or cakes (guinguanga).

An economic product of value for oil and making margarine, but just now little utilized in Angola, is the ground-nut (*Arachis hypogæa*) (Ginguba of the natives), a foot or more high, with yellow, pea-like flowers, which are pulled to the ground by the weight of the growing pod which develops just below the soil. This delicious nut has provided me with soup, pudding, dessert, and lamp oil on many a trip and on many a day. The natives make a paste of it (quitata) with chillies from a bush which grows half wild round nearly every village, and use the oil for cooking. A plant of similar habit, the earth-pea (*Voandzeia subterranea*), is also cultivated.

Of other leguminous foods, beans are the most important, and are grown chiefly by natives. They include a number of varieties of the common kidney bean, *Phaseolus vulgaris* (Feijão), the small kidney bean, *P. lunatus*. The common bean, (Vicia Faba), and pea, *Pisum sativum*, are rarely cultivated; but the chick pea, *Cicer arietinum*, is mainly grown in the south. The *Vigna Catjang*, cow pea or catyang (Macundi), Lablab (*Dolichos Lablab*), and Indian Dhal (*Cajanus indicus*) are all cultivated in small quantities. Some of the bean-fields have yielded 40 to 50 bushels to the acre.

Of tubers, potatoes yield an average of 200 bushels an acre, and sweet potatoes up to nearly double this amount, in good land.

Most of the cereals do well in Angola, especially in the plateaux. Maize or Indian corn is the most important economic product in the colony at present; 60,000 tons were raised in 1920, and sold at from £8 to £10 a ton at the ports. There are two varieties, the white (Guinbundo), and the yellow and early (Cateta). They are sown during the rainy season on the hillsides, and in the dry season at the bottoms of the valleys near streams. The average yield per acre is 22 to 27 bushels.

Millet.—The variety grown in Angola is the spiked or bulrush millet (*Pennisetum typhoideum*), which grows to 5 or 6 feet. It bears cylindrical spikes of grain, 12 inches long.

Kaffir Corn.—In parts this plant (*Andropogon Sorghum*, var. *vulgaris*) is extensively grown.

Wheat.—Wheat can be grown twice in the year, in February and in September; the average yield is from 18 to 22 bushels per acre, though on the Cuito farm, which is in a particularly fertile region, nearly 40 bushels were taken recently from some acres.

Barley and *Oats* are occasionally grown, but I was unable to get any figures showing this yield.

Rice grows well in the north of Angola, where the moisture and temperature are more suitable for its cultivation than in the east or south.

Fodder Plants.—According to Professor Taruffi, plants used for cattle fodder are Usilla, a small grass, which makes excellent forage, and grows mostly along the banks of the rivulets; Senne, a tall grass with a sweet root, an excellent pasture grass when still young; Soka, a slender and tall grass, also used for basket-making; Soke (*Eleusine indica*), which, when young, makes excellent forage; Senje and Tiombe, tall grasses, used for roofing cabins when dry, and for forage when green.

Farm and Plantation Fruits.—Most of the Angolan fruits have been introduced by missionaries, from Europe. They include the orange, lime (which now grows wild), as well as apples, pears, figs, plums, mulberries, and grapes. The mango was probably introduced from India.

Of indigenous fruit trees, the paw-paw (*Carica Papaya*) is commonly cultivated; its large fruit, delicious and digestive, grows in clusters on the stem of the tree and below its crown of large palmated leaves, which have sufficient digestive power to render tough meat tender when wrapped in it. Bananas are plentiful, as are *Anona Cherimolia*, the custard apple or sweet-sop, and *A. muricata*, sour-sop. Pine-apples are largely cultivated and grow wild in many parts of the country, as do guava trees (*Psidium Guajava*).

Plantation Products. — *Coffee.* — Various kinds of coffee plants are cultivated or grow wild in northern Angola, especially near Cazengo and Galungo Alto, where their beautiful yet ephemeral flowers gladden the landscape. These plants include the imported species, *Coffea arabica* (the world-wide plant), *C. liberica* (the best-known West African species), and *C. hypoglauca*; and two smaller plants, *C. melanocarpa*, with black berries, and *C. jasminoides*, which may be indigenous, but are not economically important. *C. arabica* is somewhat less resistant to disease and has smaller berries than *C. liberica*, but their better flavour, greater sugar content, and softer skin render machinery unnecessary in preparation. The soil, climate, and elevation of north Angola are very suitable for coffee culture, though the rainfall (50 inches) is somewhat low. Most of the "plantations" consist of the wild plants of the hillside, which are pruned and picked as required, but cultivation is also carried out, wild coffee seedlings being transplanted from the forest for the purpose.

Cocoa. — This well-known tree (*Theobroma Cacao*), 10 to 20 feet high, with its curious little flowers which blossom on the trunk, and are out of all proportion to the huge fruit that succeeds them, is doing well in northern Angola, where climate, altitude, and soil are alike suitable.

Rubber.—There are many rubber-yielding plants of the Apocynaceæ in Angola, such as the creepers of the genus *Pacouria* or *Landolphia*, including *L. owariensis* (Lecongue), *L. florida* (Mututi), which may be *L. Kirkii*, *L. crassifolia* (Rututi), and *L. parvifolia* (Mahungo), but none are suitable for plantation, nor are *L. Henriquesiana*, *Carpodinus chylorrhiza* (Otalemba), *C. gracilis* (Vivungo), or *Raphionacme utilis* (Bitinga), which provide rubber from their tuber-like root alone; but a tree indigenous to Angola, *Funtumia elastica*, with a characteristic plumed seed and a good rubber-yielder, might be so employed. Of strictly plantation rubbers, numerous varieties have been tried, the most popular for some reason being *Manihot Glaziovii*, though yielding less than many other varieties and being fragile, both to storms and rough and careless tapping. *Hevea brasiliensis*, *Castilloa elastica* (the South American plants), and *Ficus elastica*, the Indian plant, all do well. The rubber is extracted by scientific tapping in the plantations, but by crude destructive methods from the wild plants. Root rubber is obtained by pounding the whole root and separating the rubber in the shape of a mat. Natives often coagulate rubber latex on their bodies before shaping it to permanent form.

Cotton is only grown on a small scale, though

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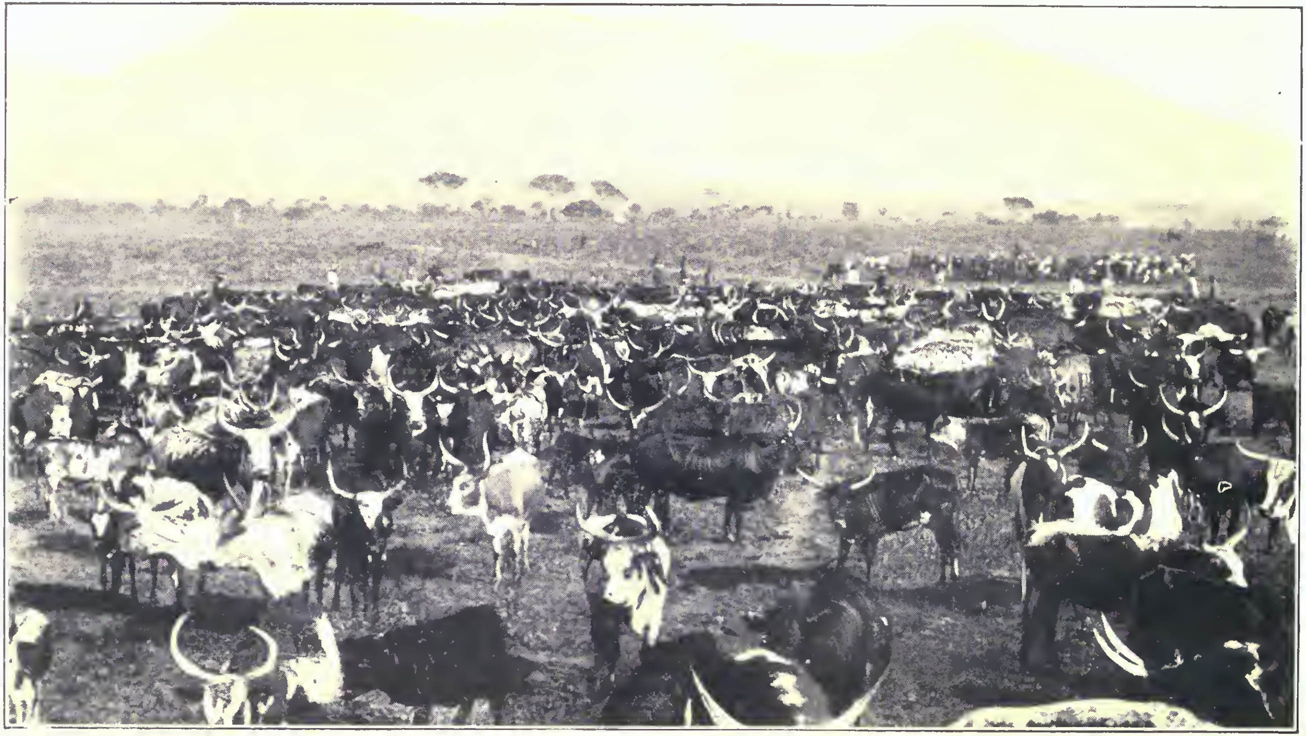

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climate and soil are suitable. The following varieties are found growing wild, though probably imported from America: *Gossypium barbadense* (var. *hirsutum*), the upland cotton, *G. peruvianum*, Sea Island cotton (Algodão di panacho of the Portuguese), and *G. acuminatum* (Muxinha). A smaller shrub, 2 to 3 feet high, *G. maritimum*, grows a yellow cotton called Algodão cor de ganga by the Portuguese.

Tobacco is extensively cultivated by the natives for their own use, but mainly experimentally by European settlers.

Fibre.—Hemp is obtained from *Agave sisalana* and other varieties, which have been introduced and are doing well, and the bow-string hemp from the Sansevierias, *S. longiflora* and *S. angolensis* (*vel. cylindrica*) (Ifi), are being experimented with. As pine-apples grow wild in great profusion in Angola, and yield a fibre that is made into cloth in the Philippines, experiments might be carried out to advantage for their employment.

Sugar-Cane.—Large areas of Angola are suitable for this plant, which was grown extensively up to 1911 mainly to produce alcohol; when the sale of liquor to natives was prohibited, the local government granted generous compensation and further stimulated production to such an extent that 24,600 tons were available for export in 1913. For some unexplained reason, in spite of every encouragement and protective tariffs, the cultivation of the plant has lately decreased.

Palms.—There are few plantations of the econ omically valuable cocoa-nut palm (*Cocos nucifera*) near the coast, and none of the equally important oil palm (*Elæis guineensis*), which grows mainly north of the Coanza River, but in places (Novo Redondo and Egito) more to the south of it, the Portuguese and natives merely collecting from the numerous wild trees.

Gums.—None of the resin-producing trees are planted; gum is collected from *Acacia Kirkii*, *Canarium edule* (Ninbato), and *C. Shweinfurtii*, and *Almeidina*, from the coagulated latex of *Euphorbia rhipsaloides* and possibly *Fockea multiflora*. There is a certain amount of fossil gum or copal also in the country.

Drugs.—The Cola (*Cola acuminata*), grown on a small scale for its nut, and quinine (*Cinchona* sp.) are being experimented with.

Dye and Tanning Products.—Though not planted, it may be useful to mention here the dye-producing plants used by the natives; such as *Pterocarpus erinaceus* (Mutete, Ndirassonde), *Copaifera coleosperma* (Muchibi), *Berlinia Baumii* (Mumuc), *Pelargonium benguellense* (On Jim Sambrilo), *Eriospermum flexuosum* (Otojo), while some of the Indigo plants are probably similarly used. Most of these dyes are red in colour. The bark of *Berlinia Baumii* and *Copaifera Mopane* are used for the tanning of leather.

CHAPTER XXI

Other Flora of the Colony, its Distribution and Nature

THE vegetation of tropical West Africa appears to be more luxuriant north than south of the Equator at similar latitudes.

The dense forest met with along the Cameroons and Muni coasts, from 6° north of the Equator, ceases 100 miles or so south of it, near Cape Lopez; at Sierra Leone, Konakry, Bathurst, and Dakar, north of the Equator, the vegetation is more luxuriant than at points of corresponding latitude like Loanda, Novo Redondo, Benguella, and Mossamedes in the south—in fact, while at Dakar the vegetation is still fairly vigorous, at Mossamedes there is desert.

If the Angolan coast is arid, the interior is beautiful, with a landscape of hill, plateau, and valley; grass, savannah, and open forest; with areas of richer forest and belts of denser bush where the fertility of the soil or the moisture of the river valley have produced their floral wealth.

The vegetation is naturally more luxuriant in the rainy and hotter north and north-west of the colony than in the colder highlands of the south and centre and the rainless south-west coast. Welwitsch described three botanical zones in Angola: a somewhat arid coastal zone from the sea-level to 1000 feet above it; the woodland lower plateaux of 1000 to 2500 feet altitude; and the savannah zone of the high plateau, where there are grass lands—wooded only in the valleys.

The varying character of the Ampelideæ and Euphorbiaceæ orders of plants admirably demonstrates these three zones, the former growing as fleshy, light green, smooth plants in the dry littoral, as dark green hairy creepers in the denser forests of the middle highlands, and as shrubs in the drier open forests of the interior; while the coastal euphorbias are high and cactus-like, the woodland plateaux have shrubs and climbing species, and on the highlands the cactus-like form reappears. Anonaceæ and Sapindaceæ and most of the Leguminosæ and Rubiaceæ, Combretaceæ, and Lythraceæ seldom descend to the coast, being chiefly found in the denser forests of the well-watered middle highland zones, as are the climbing Menispermaceæ. The Ranunculaceæ, Capparidaceæ, Convolvulaceæ, Myrtaceæ, and Apocynaceæ are widely distributed, but the Violaceæ and Polygalaceæ are found only in the north and centre of Angola. The shrubs of Malvaceæ are abundant between 1500 and 4000 feet, decreasing towards the south of Angola, and Sterculiaceæ, Tiliaceæ, and Meliaceæ, which provide so many of the larger forest trees, have a somewhat similar distribution. The Droseraceæ are only found over 5000 feet, and this applies to most of the Labiatæ and Loranthaceæ. The Zygophyllaceæ occur only on the coast, the Celastraceæ and Dichapetalaceæ in the south of the country, where the Compositæ are also more numerous. The flora will now be described as I met it (1) in the Cabinda and Congo districts; (2) along the northern railway line and in the North and South Coanza districts; (3) in Lunda as described by Marques; (4) as I met it along the Central Railway and in the Benguella district; and (5) in my southern journeys in the districts of Mossamedes and Huilla; while the description of the districts of the Cubango and Coando are taken entirely from the accounts of Almeida.

It was surprising to find a park-like country (savannah forest) and even a certain degree of aridity at Cabinda, the most northerly Angolan port, and which increased as one went south along the coast, the savannah merging into scrub and then becoming desert at Mossamedes.

At CABINDA vegetation included the oil palms (*Elæis guineensis*) (Mateva), with their beautiful fronds and bunches of brown palm nuts, yielding valuable oil for commerce and local use; fan palms (*Hyphæne guineensis*), wild date palms (*Phœnix reclinata*), the true wine palm (*Raphia vinifera*), with its huge and beautiful fronds (Bordão) used for machilla poles and building; the baobab (*Adansonia digitata*) (Bondeiro), with its immensely thick trunk (circumference up to 60 feet), which provides fibre and paper, and its white waxy flowers and gourd-like fruit: the cotton tree (*Eriodendron anfractuosum*), providing "Kapok"; plants like cotton (*Gossypium*), and pine-apples at the edge of the bush, which grew by lagoon or stream. In the interior of this little "enclave" the vegetation was mainly savannah, open forest, and sometimes bush, and the trees met here and in the Congo district were similar to those to be described as occurring in North and South Coanza.

In the CONGO DISTRICT the landscape of the coast-lands from San Antonio to Ambrizette is a little more arid than that of Cabinda; the oil palm is slowly disappearing, and the euphorbia (*E. Candelabrum*), a cactus-like tree with candelabra-like flowering stem, and acacias were added to the floral picture, on a background of withering yellow grass. Southwards to Loanda the aridity increases, and there is reason for this, for the rainfall of 30 inches at Cabinda has fallen to 20 at Ambrizette, 15 at Ambriz, and 12 at Loanda. There is little to remind one of tropical Africa in this landscape of somewhat barren cliff, with baobab, euphorbia, and acacia as the more prominent trees. In the interior of the Congo district the vegetation is mainly of the savannah, open and small forest type, though belts of bush ("muchito" of the natives) border the streams; and where the rainfall is heavier in the western parts of the inland plateau the forest becomes closer.

In the district of North Coanza which I traversed in my journey from Loanda to Melanje, and the district of South Coanza which was crossed later, an arid coastal belt of some 50 miles is succeeded by open forest and savannah, broken by belts of dense vegetation along the river valleys, and a large area round Golungo Alto where the heavy rainfall of 60 inches provides a rich flora, which was exhaustively studied by Welwitsch. The annual burning of the long grass of the savannahs is a boon to the insect-eating birds at the time, and to the hunter after it, who can only then see the game, but is very destructive to plant life.

Among the plants in this region were the various palms already mentioned, *Monodora Myristica*, and *M. angolensis* (Gipepe of the natives), splendid fruit-bearing trees with aromatic medicinally-used seeds; climbing plants like *Tiliacora chrysobotrya* (Abutia), the herb *Gynandropsis pentaphylla* (Mozambue), eaten as spinach; and a shrub, *Capparis erythrocarpos*, with bark used as a caustic. Other plants were *Rinorea dentata* (Tesse), *Bixa Orellana*, *Oncoba spinosa*, *O. Welwitschii* (Chichi), and *O. dentata* (Chichi), bushes with prickly edible fruits; *Psorospermum febrifugum* and allied species called Mutune, and the small resinous trees *Harungana paniculata* and *Symphonia globulifera* (Mungondo), all used medicinally in itch; splendid forest trees of the orders Sterculiaceæ and Tiliaceæ, including among the former *Sterculia pubescens* (Quibondo), *S. tomentosa* (Chixe), *Edwardia lurida*, the famous Cola tree, *E. heterophylla* (Mabuinguiri), and *Assonia cuanzensis*, a small tree called Mututu. Among Tiliaceæ, the shrub *Grewia* *caffra* (Mutamba) provides ropes and bow-strings; *G. pilosa*, snare loops; others like *Triumfetta semitriloba*, *T. rhomboidea*, and *T. orthacantha* are recognized by the natives, who call them Quibosa; while the leaves of the *Corchorus tridens* (Quissanana) are eaten with palm oil. Of the Meliaceæ were a number of big trees, including *Melia dubia* (Bombolo), with cinnamon-coloured wood, used in making native boxes; *M. Azedarach*, also called Bombolo (Sycamoro by the Portuguese); oil-yielding *Trichilia* (Mafura) of several species; the palm-shaped *Carapa procera* (Mucaca ncumbi); and *Khaya anthotheca* (Quibaba), a beautiful tree with drug-yielding bark. Among lowlier plants, the Balsams, *Balsamea longebracteata* (Calusange), *B. Mulelame* (Mulelame), and *Canarium edule* (Mubafo) are all used medicinally, while the Sensitive Plants (*Biophytums* and *Impatiens*), carpeting the ground, spring into movement at one's feet, and *Hippocratea indica* (Ngongo), a creeper 30 to 40 feet long, climbs the big trees of the forest. Of the Ampelideæ there are *Ampelocissus urenæfolia* (Quixibua), with purple edible fruit, and the species of *Cissus*, which tempt with their scarlet fruits and then sting with the hairs that cover them. *Phialodiscus plurijugatus* (Cachique) and *P. Welwitschii* are prominent trees, while *Anacardium occidentale* (Musuque) gives an edible fruit (Capueiro of the Portuguese), as does *Spondias Mombin* (Mugunga), and the huge *Pseudospondias microcarpa* (Musondo), one of the fingest Angolan trees, which grows to 120 feet and bears a fruit like a black grape. A medium-sized tree, *Calesium antiscorbutica* (or *Odina acida*) (Mueumbi) provides in its bark a remedy for scurvy; and another well-known tree is the *Heeria insignis* (Quintondo).

The Leguminosæ are represented by *Erythrina suberifera* (Molongo), medicinally anti-syphilitic, with scarlet flowers; and *Pterocarpus erinaceus*, producing taeula dye. Of useful shrubs are *Cracca Vogelii* (Cafoto), whose pounded leaves can poison fish in the water. Of the numerous Indigofera is *I. Anil*, the indigo bush, and of the Cæsalpinias, *C. pulcherrima* (Malosa), with bright scarlet flowers. Among the Millettias are small trees and bushes like *M. drastica* (Ditenda), which yield a purgative from their pods; *M. versicolor* (Mussumbe), yielding hard timber; and *M. rhodantha* (Quiseco), providing a drug for rheumatism and nervous complaints. *Herminiera Elaphroxylon* (Bimba), growing near marshes, furnishes a light wood for furniture and unsinkable rafts; *Uraria picta* (Caiala, Camoxe), which means always a boy, provides a popular aphrodisiac. The shrub *Abrus precatorius* (Fingogifingo), *Stizolobium pruriens* (Quincuta), a climbing shrub with stinging hairs, and *Physostigma cylindrospermum* (Maxima ia Muxito), also occur. Among herbs, *Dolichos Dongaluta* (Dongaluta) provides a drug for quinsy; and *D. Lablab* and *Botor palustris* (Mabala) have edible seeds, while the shrub *Eriosema Muxiria* (Muxiri) provides a root from which beer can be brewed. *Pterocarpus mellifer* (Mulumba) is a bee-frequented tree on which the natives place their hives; *P. tinctorius*, a handsome tree with blood-red wood and roots, providing the well-known taeula dye, drugs, and charms; and *P. erinaceus* (Mutete) yields resin. *Lonchocarpus macrophyllus* (Mutala Muenha) is an immense tree with handsome violet flowers, *Mezoneurun angolense* (Sascha) bears red and yellow flowers, *Cassia Sieberiana* (Mossambe) produces fruit (Mosua) used in divination, and *C. occidentalis* (Munhanoea, Fedegoso of the Portuguese), yields a febrifuge. Among Bauhinias of many kinds, *B. reticulata* (Mulolo), a small flowering tree, provides fibre for making aprons and a decoction for ulcers. The Berlinias include *B. paniculata* (Panda), *B. Baumii* (Omue), and *B. glabrior* (Mutoc). Other trees met with are *Cynometra laxiflora* (Hula), providing a good timber; Gigalobiums including *G. scandens* (Fugi), and *G. abyssinicum* (Musoso), also *Piptadenia africana* (Muzango); among acacias, *A. Welwitschii* (Mubange), *A. Sieberiana* (Mussongue); among Albizzias, *A. versicolor*, *A. coriaria*, and *A. angolensis*, all called Mufufutu and used for tanning leather, and *A. Welwitschii* (Muanze).

Other trees include *Chrysobalanus Icaco*, with an apple-shaped fruit (N'gimo); *Parinarium excelsum* (Nichia), a tree with edible fruit; *Rubus pinnatus* (Musano), a shrub yielding a medicine against quinsy; and *Kalanchoe Welwitschii* (Tuta riambula), used in witchcraft. Of the Combretaceæ, *Terminalia sericea* is widely distributed and provides good timber (Mueia); *Combretum constrictum* (Muhondongolo), a shrub, yields a remedy against thread-worm in children; another, *C. flammeum*, with carmine flowers, looks as if on fire; *C. lepidotum* (called Mucage in north Angola and Munhangue in the south, Carvalhao by the Portuguese) provides good timber; *C. dipterum* is a huge, almost leafless, flowering tree; and *C. tinctorum* (Lunga-lasoge) provides a dye from its roots and branches. Of fruit-bearing shrubs and trees, among the Myrtaceæ there is *Eugenia Jambos*, the Indian jamum; among the Passifloreæ, *Adenia lobata* (Mobiro), a shrub with yellow edible fruit; and among the Cucurbitaceæ, *Adenopus breviflorus* (Ditanga-sese), providing a fruit called Coloquinta. Of the Umbelliferæ, the medicinal plant *Pimpinella platyphylla* (Dongolundo) is used in diarrhœa, while *Peucedanum fraxinifolium* (Calusange), a tree 20 feet high, yields a drug for chest complaints.

Among the Rubiaceæ, *Mamboga stipulosa* (Mungo) is a big tree prized for its timber; *Corynanthe paniculata* (Mangue), another splendid tree, forms extensive forests in north Angola; *Crossopteryx Kotschyana* (Musesse) is a small tree with a hard yellow wood; *Mussænda erythrophylla* (Diluia), a climbing shrub with large red and yellow flowers; *Gardenia Jovis-tonantis* (N'dai), a small tree used by the natives to protect their huts against lightning, and bearing large yellow flowers; and *Fadogia Cienkowskii* (Muningi), a herb bearing an edible fruit. Of the Compositæ, *Vernonia senegalensis* (Molulu), a shrub with purple flowers of several varieties, is used medicinally; *V. conferta* (Quipueulo), a tree with very large leaves; and *V. auriculifera* (N'dolo), also occur. Of the Ebenaceæ are *Maba Mualala*, a beautiful laurel-like tree with a hard dark timber; *Diospyros mespiliformis*, a large fruit tree (Mulende (N.), Menianti (S.), and Silviera of Portuguese); *D. Dendo* (N'Dendo), an evergreen tree furnishing some of the best timber in Angola. Of the Apocynaceæ (which are also dealt with under Plantation Produce), *Pacouria* (*Landolphia*) *owariensis*, an evergreen shrub, yields rubber, and *P. florida* (Matuti or Rututi), and *P. parvifolia* (Mahungo) yield edible fruit, as does *Carandas edulis* (Jingongona in the north and Munhiangolo in the south), while *Strophanthus intermedius* (Bella or Musua) provides wood for pipes.

Of the Asclepiadeæ, *Chlorocodon Whiteii* (Alcaçuz of the Portuguese, Mundondo of the natives) is a climbing shrub with a liquorice-like root. Among Loganaceæ are *Nuxia dentata*, with good timber; *Anthocleista macrantha* (Quipucolopucolo), resembling a palm; *Strychnos Volkensii* and *S. Welwitschii* (called Maboca or Mabolle), having an edible orange-like fruit with a hard rind; while *S. pungens* has a similar inedible fruit. Of the Boragineæ, *Cordia aurantiaca* is an evergreen tree with yellow flowers, and a bark useful for fibre. Of the Convolvulaceæ is *Ipomœa Batatas*, whose leaves are eaten by the natives as spinach. Among the Solanaceæ, *Solanum albifolium* (*saponaceum*) produces seeds which are used as soap; *Capsicum cordiforme* (Molungo) yields a pungent fruit, and *Datura Stramonium* (Jila-andundo), yielding the well-known drug, is used like Casca in trials by ordeal. Of the Bignoniaceæ, *Spathodea campanulata* (Mutenandua) is a large tree, with strikingly big scarlet flowers; *Kigelkeia pinnata* (Cambumbi), a tree with yellow flowers and huge cylindrical fruit which I remember meeting in Mozambique in East Africa, where it is called Kigilkeia. Of the Pedaliaceæ are *Sesamum orientale* (N'guilla), and the beautiful flowering *S. angolense*. Of the Verbenaceæ are *Premna angolensis* (Mungongo), a tree with beautiful white flowers, and *Vitex Cienkowskii* (Muxillo-xillo); and of the Labiatæ, *Geniosporum Mutamba* (Mutamba), like a potato, is cultivated and edible.

Of the Amaranthaceæ are *Amaranthus tricolor* (Jimboa), eaten like a beet sprout, and *A. viridis*; of the Piperaceæ, *Piper guineense* (Jihefo or Gihefo), the chilli plant. Of Euphorbiaceæ are *Euphorbia Candelabrum* and *E. Tirucalli*; the shrub *Jatropha Curcas* (Mupuluca), the seeds of which are used as a purgative; *Croton Mubango* (Mubango), of which the root and gum are used for similar purposes, as is *Ricinus africanus*, which grows to 20 feet in height. The *Manihot utilissima* (Mandioc) is dealt with under Produce; *Alchornea cordata* (Bunce), a shrub with immense leaves, is used as a black dye. Of the Moraceæ, *Myrianthus arboreus* (Musibiri), *Ficus psilopoga*, *F. Welwitschii*, and *F. Mucuso* form large and striking trees; *Bosqueia angolensis* (Munguenga) and *Treculia africana* (Di'zanha) are both medium-sized trees, the latter providing refreshing beverages; while *Chlorophora excelsa* (Mu[illegible]mba-camba) is a fruit-bearing tree. Of the Ulmaceæ *Celtis* [illegible] (Quibaba), which has a handsome crown of leaves, occurs in the Lupollo forests of south Angola.

In Lunda, a district of open forest and grass-covered hilly plateau, traversed by the denser-wooded valleys of its numerous rivers, Marques mentions meeting, among individual plants in the valley of the Coango, *Acacia Farnesiana*, *Gossypium herbaceum*, and *Symphonia globulifera*, and among large trees *Nauclea stipulosa* (Mungo), and *Canarium edule* (Mubafo).

On the Camau River, palms, *Cocos nucifera* and *Phœnix dactylifera*, were numerous, and some of the tree ferns over 10 feet high. In the valley of the Cuengo, he describes an occasional rich flora as alternating with arid plains. The forests consisted largely of "Pandas," *Berlinia angolensis* (Welw.). Other trees included the Muzueo, allied to *Cassia Fistula*, *Parinarium capense* (Gighia), *Strychnos Welwitschii*, *S. pungens* (Mabolle, Cabolle), *Haronga madagascariensis* (Mutune, Muzoe), and *Raphia vinifera*.

In the valleys of the Cuillo and Luangue were *Erythrina suberifera*, *Bombax pentandrum*, *Acacia albida*, *Euphorbia Tirucalli*, *Chenopodium ambrosioides* (Herva Santa Maria of the Portuguese), *Nicotiana rustica*, *Solanum edule*, and *Hibiscus esculentus* (Lupossa), *Gardenia Jovis-tonantis* (the N'dai), *Gomphia reticulata* (Ieun-eassadil), and a fern similar to *Polypodium Filix-Mas*. In the valley of the Luela, where in places vegetation was luxuriant, were met *Ficus pseudo-elastica*, *F. psilopoga*. *Odina acida*, *Erythrina suberifera*, *Jatropha Curcas*, *Ricinus africanus*, *Canna iridiflora*, and the Gindondolo or *Solanum saponaceum* (Welw.). In the valleys of the Rivers Chicapa and Luachimo was a rich vegetation which included *Sterculia acuminata*, an Artocarpea, probably *Myriopeltis edulis* (Welw.); trees like the *Parinarium capense* (Gighias), *Bauhinia reticulata* (Mulolo), Mupepes, *Strychnos pungens* (Mabolles and Cabolles), *Vitex Cienkowskii* (Muxillos-xillo), and others which have already been described; *Piper guineense* (Gihefo), the Ampelideæ, Quichibua and Mucuta-Voada; three Malvaceæ, Cabodi, N'zonzo, and N'bunze; the Solanaceæ, *Datura Stramonium* and *D. fastuosa*, *Clematis grata* (Lumbozo); and in the swamps, ferns, a *Colocasia*, with pretty heart-shaped leaves, *Nymphæa stellata*, the Mat'chu, *Dioscorea* sp., the Catanta, a climbing shrub of the genus *Vitis*.

The forest trees were very similar to those already described in the other parts of Lunda, the *Bauhinia reticulata* (Mulolo) being common. The Muage or Mitonde, the handsome fetish tree (probably *Erythrophleum guineense*), which provides the Casca or bark for trial by ordeal, is a handsome tree and better known under the title of Muave. Among smaller plants was the Cangululo, allied to *Solanum nigrum*; the Mullenbuege, of the family Ampelideæ, and the Cat'gilongo, *Oxyanthus macrophyllus* of the Rubiaceæ.

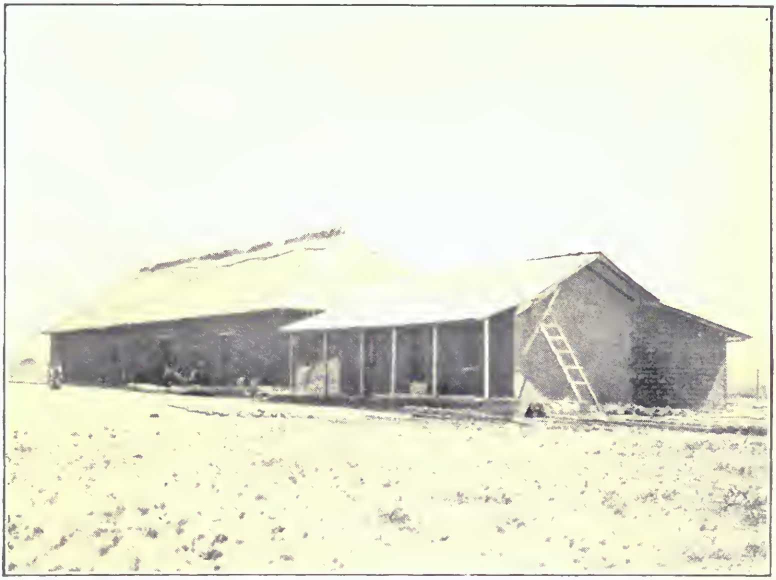
In the valley of the Chiumbe the plants which Marques specially mentions included the *Ficus pseudoelastica*, *F. psilopoga*, *Ricinus africanus*, *Jatropha Curcas*. *Euphorbia rhipsaloides*, *Croton Mubango*, *Odina acida*. *Bombax pentandrum*, *Acacia Farnesiana*, *Erythrina suberifera*, *Tephrosia Vogelii*, and splendid specimens of the Brazilian Urucu or *Bixa Orellana* (Quisafu), met for the first time since leaving Melanje.

Among useful trees met in this region were the *Canarium edule* (Mubafo) and the Casalla tree, the leaves and branches of which are used in various mystic rites, to foretell the success or failure of a coming hunt. Pretty local plants were the Catoli, a species of *Hibiscus* with yellow flowers; a flowering bush, the N'dongo-a-m'joi, possibly *Dolichos urens*; and the Cabodi, a species of *Heinsia*, a bush with a pretty white tubular flower. Among creepers were Catanganhe, a species of *Ipomœa*; and the Luquello, allied to *Vitis vinifera* (Linn.).

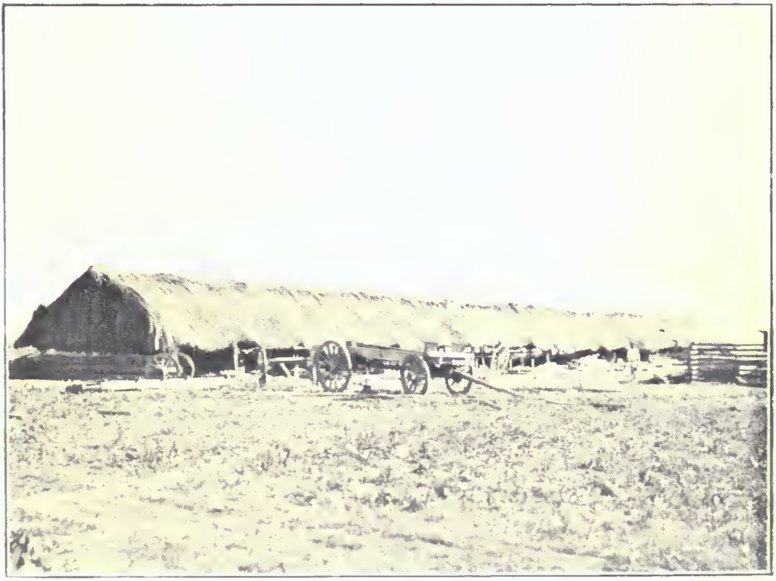
The country round Cahungula in the valley of the Luana was arid, and little vegetation grew on the poor soil, which was clay with supervening sand and stone. The trees met with on the richer soil near water were species of *Ficus*, including *F. Mucuso* and *F. psilopoga*, the *Erythrina suberifera*, *Odina acida*, *Bombax pentandrum*, and *Canarium edule*. Beyond the Luana was the great Kasai River flowing north to the Congo, which forms the north-eastern boundary of Angola, and separates it from Belgian Congo.

Benguella.—In central Angola, from Benguella along the railway line to the interior, the general type of vegetation, owing to the high altitude and cold climate, is scantier but somewhat similar to that in the north; there are no oil palms, and the coastal zone of vegetation of the

A FARMSTEAD



OUTBUILDINGS OF THE FARM—NEW STYLE



AND THE OLD

baobab, euphorbia, and acacia type is wider. *Chrysobalanus Icaco* occurs near Benguella.

Among the more valuable trees of the central Angola plateaux described by Professor Taruffi are *Parinarium Mobola* (Noxa), with a hard timber resembling oak, suitable for shipbuilding; *Burkea africana* (Mako), or iron-wood, resistant to white ants; the Kaperengalo (another *Burkea*), with similar timber; *Cleistanthus angolensis* (Nganja), a tall tree with a splendid, hard, ant-proof, and heavy timber, resembling ebony; *Brachystegia spicæformis* (Omanda), a medium-sized tall tree, yielding moderately hard timber, and fibre from its bark, abundant in the Huambo forests; *Anisophyllea fruticulosa* (Luhongo), a medium-sized tree yielding as products good timber, a tanniferous bark, and an edible fruit; the Umbula (sp. of *Uapaca*); *Cassia Sieberiana* (Sui), with timber suitable for shipbuilding; *Berlinia Baumii* (Omue), one of the biggest and commonest trees, with good timber, a bark rich in tannin, and an inner bark useful for textile fibre; the Jungue (*Faurea* sp.), a tall tree with timber resembling beech, useful for shipbuilding and furniture; *Pterocarpus erinaceus* (Ndirassonde), called "blood-weeper," owing to its bark giving a liquid the colour of blood, a tall tree, yielding a fine hard-grained and ant-proof timber.

Many of the trees described as occurring in the north of Angola are found in the centre of the province as well, though the vegetation is generally less luxuriant and tropical than in the north. *Ficus Sycomorus* (Mulemba) reaches very large dimensions in the central plateau, where it is the favourite shady tree found near the villages, and is used by the natives to make palisades for protecting their habitations and crops. In the interior of Benguella, as in the north and south of Angola, are numerous tree creepers; among them are the rubber vines (*Landolphias*), with magnolia-like leaves and jasmine-like flowers. In the forests of more luxuriant growth the tree-creepers sometimes form a regular roof garden of colour, by flowering on the summits of the forest trees; but some of the creepers are very disagreeable neighbours. There is one, *Mucuna pruriens*, with maroon-coloured flowers, and pods covered with fine hairs, which cause a most horrible itching if they get on to the hands or body.

In the swamps and near marshy rivers there grow *Herminiera Elaphroxylon* (Bimba) and vast quantities of the Papyrus (*Cyperus papyrus*), which served the Egpytians and other ancient people for paper, and now serves the Angolan native for making his mats or loangoas.

Mossamedes District.—The coastal zone of this province, from Cape Martha to the Cunene River, forms a gradually widening stretch of desert land and subterranean rivers which extends for a varying distance between the seashore and the rampart of the Chellas and the high plateau.

Growing in the desert country to the south of Mossamedes is the sometimes century-old *Welwitschia mirabilis*, with a trunk only a few inches long, ending in a brown flat top nearly 2 feet in diameter, divided into two lobes, from each of which protrudes a leaf 5 to 6 feet long and of leathery consistence, split into ribbons in the older plants. From the black-lobed and flattened centre, close to the insertion of the strap-like leaves, arise a number of cymes a few inches high, bearing cones which are the true flowers of this plant. In the same region is found also the strange-looking Nara (*Acanthosicyos horrida*), a shrub 3 or 4 feet high which, through the multitude of its branches, intercepts the shifting sand of the desert till a mound is formed, above which a few of the uppermost branches project, carrying no leaves but a yellowish green flower.

Between Mossamedes and the high plateau above the Chellas, and along the third and most southerly of the Angolan railways on which I travelled, there is desert for the the first 30 to 40 miles, then a belt of scrub to the base of the Chellas, where *Mærua angolensis*, *M. crassifolia*, the fruit-bearing bushes *Oncoba spinosa*, *O. Welwitschii* (Chichi), *Gymnosporia senegalensis*, and *Heeria insignis* occur.

Farther inland there are baobabs, euphorbias like the Cassoneira (*E. Tirucalli*) the leafless *Pachypodium Lealii*, *Sansevieria angolensis*, acacias, false cedars (*Tamarix orientalis*) (Cedro), *Copaifera Mopane* (Mopane, Mutiati); still farther inland, *Erythrina huillensis* (Mueandis), emerald-green trees with vermilion flowers; *Cissus pruriens*, with its luscious red grapes covered with stinging hairs, brightening the landscape; *Ximenia americana* (Ampegue), bearing an oily seed; and *Peltophorum africanum*, often taken for a mimosa.

There are mimosas; Munhampalas with long thorns; a very thorny acacia, *Acacia reficiens* (Mugondo), the "cat's claw" of the Portuguese, forming curious copses running in a north and south direction and flourishing especially on the Montes Negro; and among others *A. pennata* (Muanu), *A. albida*, and *Euphorbia Candelabrum*. Along the motor road to Lubango and the plateau one passed a varied flora, ferns of many kinds nestling by the waterfalls with the monster baobabs near by, ugly euphorbias (*E. Candelabrum*) and twisted *Bauhinia reticulata* (Mulolo), and the sweet-scented jasmine (*Landolphia parvifolia*) (Mahungo), creeping up the great Mulembas (fig trees). As one climbed higher, the baobab and Mutiati disappeared, and Phœnix palms, Sansevierias, and fibre-giving Liliaceæ took their place. At last the plateau is reached, and at the edge of these wind-swept heights the vegetation is more stunted than in the valleys we have climbed.

The South Plateau: Huilla District.—Marquardsen, who gives little detail, describes the vegetation of the Huilla plateaux from the Chellas to the Cuando River, its eastern border, as a tree steppe where the somewhat stunted forests enclose or alternate with grass lands and savannah, while near the rivers and lagoons grows a denser and richer flora. In the north of this region and as far south as an imaginary line drawn from Humpata to the junction of the Coluhi and Cunene, and from here eastwards to the Coando, the dominant forest tree is the *Berlinia Baumii*, which forms entire forests mixed with *Burkea* *africana*, and *Copaifera coleosperma.* South of this zone and as far as the sixteenth degree of longitude (50 miles east of the Cunene) the forest consists largely of *Copaifera Mopane* (Mutiati), and the acacias (*A. Kirkii*, *A. albida*, and *A. hebeclada*) towards the south; but with a greater variety of trees towards the north-east. Both baobabs and *Hyphænes* are found in this zone. To the east of the sixteenth degree of longitude and south of the Berlinia zone the baobab disappears and the forest consists of *Copaifera coleosperma* (Muchibi), *Burkea africana* (Mukalati), *Baikiæa plurifuga* (Umpapa), and *Hyphænes*, chiefly *H. Ventricosa*, the dum palm.

Welwitsch, whose observations on Angola are incomparably the most valuable even now (seventy years after they were made), did not devote the same attention to the south as to the north of the country. The plants he describes are nearly all round Huilla, Humpata, and Tripollo and Bombo—that is, on the western edge of the vast plateau which stretches to the Zambezi. *Herminiera Elaphroxylon* grows in marshy parts of the Huilla plateau, as does *Pterocarpus erinaceus*, called Mirahondi in the north but Munhaneca near Humpata. Many varieties of *Ficus*, for example, *F. psilopoga*, and *F. trachyphylla*, occur. Among the Rubiaceæ, *Adina microcephala*, var. *Galpini* (Mohanbo), is a huge tree with oily, hard timber. The huge *Lonchocarpus macrophyllus* (Mutula mena), *Peltophorum africanum* (a tree 20 to 30 feet high, looking like a mimosa), *Berlinia paniculata* (Panda), and *B. Baumii* (Mumue) form forests towards the north of south Angola, as do the *Brachystegia spicæformis* (Omanda, Mupanda) and *Copaifera Mopane* towards the south. Among acacias scattered throughout this area are *A. albida*, *A. Sieberiana*, *A. reficiens* with curved thorns (the "cat's claw" of the Portuguese), while *Parinarium Mobola* (Noxa), a fine timber tree with an oil-yielding fruit, forms forests along with species of *Protea*, *Leucadendron angolense*, *L. Welwitschii*, and *L. leucoblepharum*. There also occurs *Tarchonanthus camphoratus* (Pau Quicongo) and *Philippia benguelensis* (Cedro pequeno). Other trees met are *Combretum lepidotum* (Munhangue), *C. constrictum* (Mahungolo), *Vitex Cienkowskii* (Muxillo-xillo), and *Strychnos Welwitschii* and *S. pungens* (Maboques).

A long and detailed description of the vegetation of the eastern portion of south Angola is given by Almeida in his book on that country. This author mentions a great many localities and many native names of plants, but few of their scientific titles. I have endeavoured to remedy this to a certain extent, but many of the trees are difficult to recognize by their native names alone. Almeida remarks that in the valley of the Cacoluvar and Lupollo are met the Mohilo (false oak), *Ficus* sp. (Mulembas), red-coloured Mangais, *Burkea africana*, and Omula (with a refreshing fruit); Muncondo, the fruit kernel of which contains strychnine; Mubendi, with an edible fruit; the Huilla cedar (*Tarchonanthus camphoratus*), camphor-wood, called Pau Quicongo by the colonists and natives; and sandal-wood. On the higher ground between the Cacoluvar and Sinde Rivers and to the south are denser forests of *Copaifera Mopane* (Mutiati), *Bauhinias*, *B. reclinata* (Mulolo), *B. Macrantha* (Wutit), *Erythrina huillensis* (Mucandis), and tall *Wulfhorstia ekebergoides* (M'tuka). The *Combretum constrictum* (Muhangola) is limited to the higher plateaux and the tablelands of Quipongo. Along the hills bordering the Cacoluvar from Quihita to Cahama there is found the Mohilo, with its great crown of leaves, *Ficus* of many varieties (Mulembas), including *Apodytes dimidiata*, Biriambundo tree (Figueira Brava of the Portuguese); and baobabs; while acacias grow in the black clay soils in the valleys of the Cacoluvar, Tunda, and Sinde Rivers. Near Gambos one finds *Bauhinias*, *Ficus Sycomorus*, and euphorbias.

In the lower courses of the Sinde and Cacoluvar, and from Chicusse to Dongoena, and from Cahama to the Cunene at Lufinda, there are belts of thorn scrub running north and south in the great forest that fringes Mucopa; near Binguari there is a great deal of *Carpodinus chylorrhiza* (Otalemba), a rubber plant, and at places on the Cacoluvar and near Gambos are rubber vines as well. Beyond Chicusse to Tchipelongo on the Cacoluvar River, and along the Cunene River, from Mulondo to the junction with Cacoluvar, are great baobabs and *Hyphæne guineensis*.

The vegetation of the banks of the Cunene can be divided into three zones: as far as Mulondo there are good timber trees, especially near Capelongo, with a little thorn scrub; in the river islands of Quissueo and Pandera there is a luxuriant vegetation of palms, bamboos, tree ferns, and a kind of mango which sends roots to the river; south of Mulondo, on the right bank, are found *Copaifera Mopane* (Mutiati), *Bauhinias*, acacias, Mulembas (*Ficus* sp.), and baobabs; while on the left bank these trees are not met with and the thorn scrub, largely *Acacia Kirkii*, is denser.

At Cafu on both banks for a long distance towards the east there are splendid trees; Matebas, *Adansonia digitata*, *Borassus flabellifer*, Hyphæne, and Bauhinias; while on the left bank near Cuamato, to the east of it, north towards the valley of the Cuvelay, and near Evale and Cafima, there are baobabs.

As one approaches Dongoena there are large belts of thorn scrub, prolonged along the Cunene and mixed with occasional Mateba palms (*Hyphæne guineensis*), and Quichuanga (? *Mimusops Welwitschii*); while the wild cotton tree is found from 12 to 20 miles from its banks.

In the watershed between the Cunene and Cubango one meets forests of fine trees from Capelongo to Cassinga, and from Cuvelay to Umbal. To the south, near Handa, there are almost impenetrable thorn forests, interspersed with grassy glades. In the clearings between the thorn belts of the forest of Bindana, between Handa, Cuamato, Cunene, and Cuanhama, are clumps of acacias, *Bauhinias* (Mulolos), *Copaifera Mopane* (Mutiati), *Baikiæa* (Umpapas), *Brachystegia spicæformis* (Mupandas), and *Berlinias* (Mumue).

The baobab is found near the rivers, and rubber plants are common in the woods of this region, and on higher ground are open forests of Mupandas.

FLORA OF THE CUBANGO DISTRICT. — In the valley of the Cubango itself the vegetation is in some places of tropical luxuriance. Thorn forests are found south of Massaca near the Cubango, and in the watersheds and valleys of this river, the Cuito, Luiana, and Cuando; being especially dense near the last-named river.

Brachystegias (Mupandas) and *Berlinias* alternate with the thorn scrub in the hills between the Cubango and its tributaries, giving place to the tall and twisted Muearatis in the valley of the upper and middle Cuito. In the Cubango valley besides the other trees are the Mulembas (*Ficus*); the Nueibe, with its bulky trunk, reminding one of a huge olive, but with a fat-yielding fruit like a large red bean; and a large tree, Vungo-Vungo, used for making canoes.

The vegetation of the country to the east of the Cubango River presents a monotonous appearance, and only in the valley of the Cuchibe and Ninda does it alter to a more tropical form; in the latter valley are woods of the scented Ocos.

In the watersheds of the Cubango and Cuando north of 17° latitude, belts of rubber plants, Otalemba and Vivungo (*Carpodinus chylorrhiza* and *C. gracilis*) and *Landolphia Henriquesiana*, are being destroyed by natives. Many of the clearings are carpeted with a great variety of grasses, while occasional tree clumps rise like islands in the glades. The banks of most rivers and lagoons are covered with reeds—sometimes so dense and interlaced as to give the appearance of solid ground. In the water float *Nymphæa stellata* and *N. cerulia*.

Flowers.—Many flowering plants have already been alluded to in the description of the flora of the various districts of Angola, but some have been omitted which arrest attention with their beauty. It is impossible to give more than a few names, and pay a small tribute to the joy they brought me on many a weary day.

Perhaps the most beautiful, in their massed effect of white flower and green fruit, are the many varieties of clematis, while the Angolan Abutilons and Hibiscus are worthy of their reputation for beauty — though their general colour scheme was yellow, as was that of most flowering species of Ochnaceæ. Most of the flowering Ampelideæ (genera *Leea* and *Cissus*), and Combretaceæ seemed to have adopted a red colour scheme for their flowers, and in *C. flammeum* had run riot in the brightness of this colour.

Many of the Cæsalpinieæ sub-order of the Leguminosæ had pretty flowers, especially *C. pulcherrima*; and the mimosa flowers, though small, were delightfully scented—a remark which applies equally to the many jasmines of the Oleaceæ.

The Gardenias of the Rubiaceæ are as beautiful here as elsewhere. The numerous flowering Compositæ remind one of flowers nearer home with their modest prettiness, and of how much more generous Nature has been in her gift of flowers to those whom she has also given the discomfort and disease of the hotter lands. Some of the

Bignonias have beautiful flowers, especially *Kigelkeia pinnata*. Many of the Pedaliaceæ (especially *Sesamum angolense* and *S. pentaphyllum*) and the Selagos (*S. alopecuroides* and *S. Welwitschii*) have a purple and white colour scheme, the latter flowers even appealing to the rather prosaic African women, who wear them in their hair. Beautiful convolvuluses cover trees, bushes, and even the ground ; while with the first rains, even in the most arid country, all sorts of ugly ground bulbs and roots blossom suddenly with beautiful flowers ; in the fertile uplands there is a floral display of lily, iris, and amaryllis which fills one with wonderment, and aloft in the northern forest trees a flower richness of tree blossom, creeper, and orchid, which is only equalled by the water-lilies which cover lagoon, pool, and stream.

POISONOUS PLANTS.—There are dangers as well as delights in the floral kingdom of Angola. Man has suffered for centuries by accident or intention from the various species of *Strophanthus strychnos* and the dreaded ordeal plant Muave (*Erythrophleum guineense*), while he uses the poisonous juices of *Focea multiflora* to tip his arrows, and those of *Euphorbia Candelabrum* and *Cracca Vogelii* to poison the water supplies of zebra and fish.

Animals, especially cattle, suffer themselves from the poisonous effects of *Dichapetalum Veninatum* (Machau of the Boers) when it is young and hidden amid the grass.

THE RELATION OF ANGOLAN TO OTHER FLORA

A work by Baum (*Kunene-Sambezi Expedition*; Berlin, 1903), which gives an exhaustive account of the flora of southern Angola, was not received till the book was in print. I would like to pay a tribute to this standard work, which would have saved me weeks of reference from unscientific Portuguese sources. Of over 400 plants described by Baum, 276 were actually new species. Of the 400, 214 were found only in tropical Africa, 132 common to both tropical and South Africa, and only 58 purely South African forms—which facts show the affinity of the Angolan flora to that of tropical Africa; 132 of the species were also common to Asia (and 41 of them only there), 64 to America (and 11 there only), and 12 to Europe and Australia.

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,, *lurida = Cola acuminata*	Cola Tree	343
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,, *barbadense*	Cotton	337
,, *herbaceum*		350
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,, *peruvianum*	Sea Island Cotton	337
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,, *vulgaris*	Feijão (Port.)	333
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CHAPTER XXII

The Economic and Game Future of the Colony

MY long journey had come to an end, and shipping was so uncertain that when the chance of a homeward passage came it was taken at once, and I sailed in the *Beira*. Besides, it was time to leave Angola, for the rainy and unhealthy season had commenced, my health had broken down through hard marching and the difficulties caused by want of carriers, and I was in no condition to stand more fever.

We sailed from Mossamedes, after friendly farewells, past Benguella and Lobito Bay, Loanda, and the Angolan coast.

The *Beira* was larger and faster than the *Mossamedes*, and though we put in at San Thomé, Principe, and Dekar, she reached the Tagus and Lisbon at the end of a voyage of only twenty-four days, whereas the passage out had taken thirty-seven.

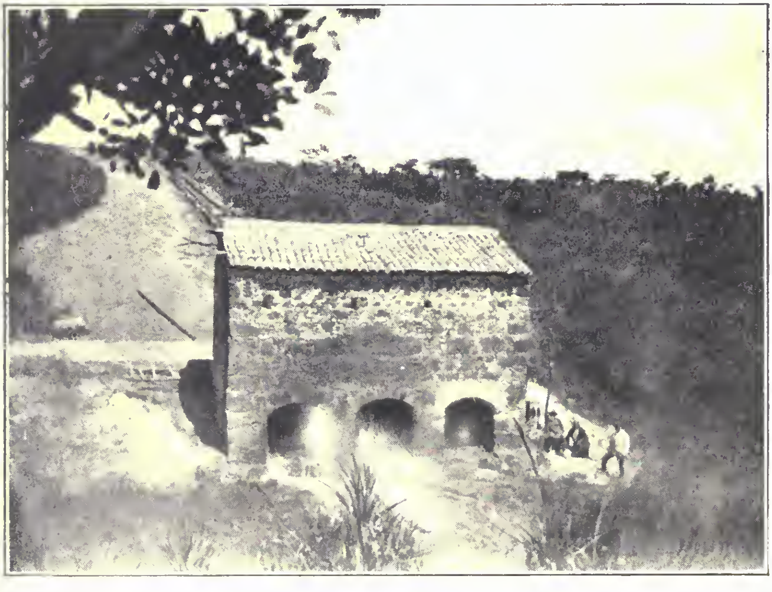
As the ship sailed north along the Angolan coast, it was curious to watch the landscape change from desert sand near Mossamedes, to straggling grass and open scrub near Benguella, and in its turn, farther north, into savannah.

It was interesting to contrast the old towns that had served as seaward gates for centuries, Benguella and Loanda and Ambriz, with the growing, upstart town of Lobito, restless and commercial. The old towns stood for a great historic past of European venture and influence, itself grafted on to a civilization which, though African, might still be called great; the kingdom of the Congo with its long lines of kings and courts and ancient customs.

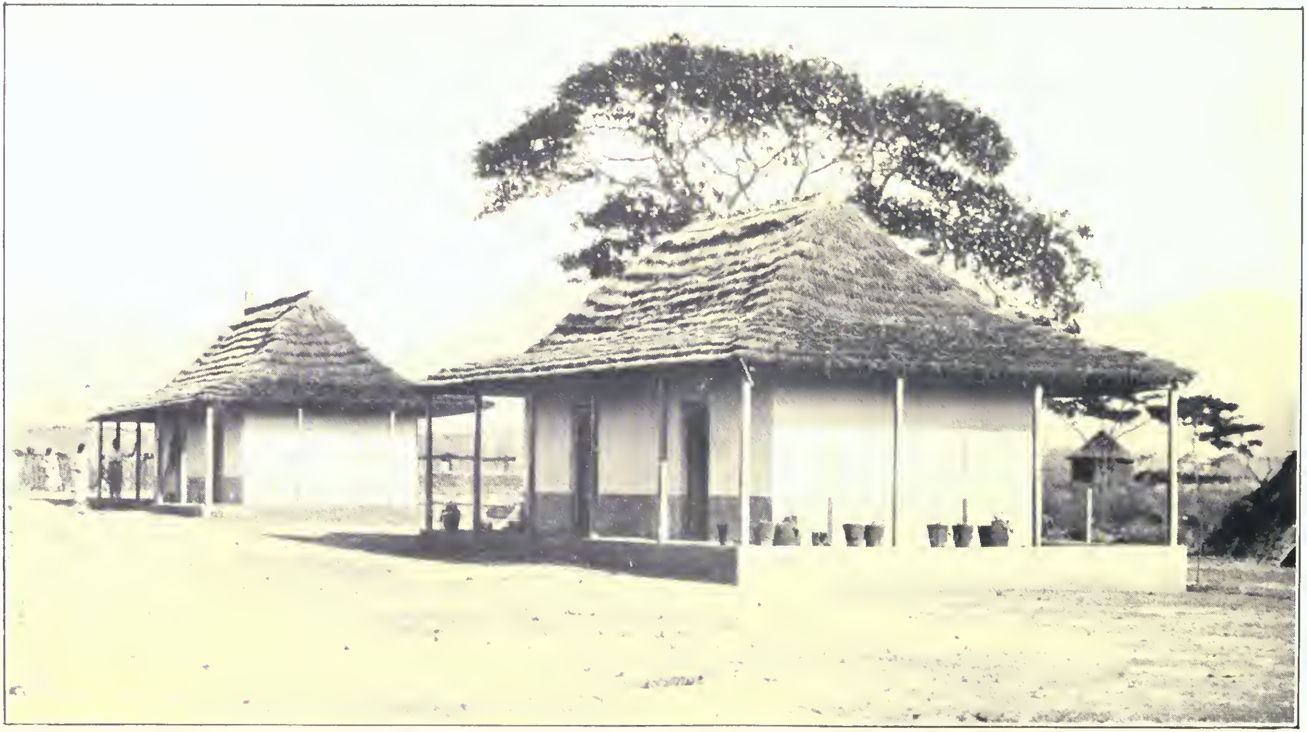
They were a brave-hearted race these Portuguese sailors that manned the little high-pooped caravels, little larger than our trawlers, and sailed them past uncharted shores, through unknown seas ever onward, searching first the mysterious Prester John, and then new worlds to conquer for the Faith and Portugal, and from which to bring slaves and gold and ivory. It must have been a stirring sight to see these sea captains, and their sailors in doublet and hose and jerkin, with sword and spike and arquebus, fighting at great odds, first the natives whose weapons were near the equal of their own, then Dutch and French, to hold what they had found with such dauntless hardihood.

They built well, these old adventurers, as stone fort and church, house and palace, still can show; and if those who came after them had sought and fought and built with half their zeal, this country of Angola would now have been a great colony of Portugal.

WHEAT YIELDING 40 BUSHELS AN ACRE



WATER-POWER



SETTLERS' HOUSES

It is not for an Englishman to say aught against modern Portugal; every race has its day of greatness—Babylon and Byzantium, Crete and Carthage, Greece and Rome. Portugal was our leader then in adventure, in commerce, and in letters. We are a great Empire to-day, great especially in our daughter States, but who knows, perhaps the writing is already on the wall, and hundreds of years hence some other race may have risen to equal greatness while our memory is but history. Perhaps it is so ordained that one nation shall rise after another, wave succeeding wave of power and culture.

Small Portugal has certainly done her share, and our respect goes out to all her past, as our sympathy and friendship should go with her every effort for the future of this ancient people and their colonies.

There are many reasons why Angola, the oldest of the African colonies, has not prospered; and some of these are good reasons. Portugal's discovery of Angola was followed by those of India and the New World, and neglect of her African possessions was forced on Portugal by the distribution of her exploring and colonizing energy; later, she had with waning power to struggle with Holland, France, and Spain for her oversea trade and possessions. I am glad that England was never against her and often with her, even to an alliance, the oldest in the world.

Of late years, there have been many mistakes made by Portugal in regard to Angola. One of these was her failure to colonize the country with

Portuguese. A small country with a comparatively large population, she possessed here a great colony with millions of acres of land especially suited for her thrifty and hardy peasants and farmers, yet it was peopled at first only with convicts; though in these very years her good settlers were pouring into the Americas to enrich them with their thrift and labour. It is probable that a quarter of a million good workers, who could have made of Angola another Brazil, were lost to Portugal. Madeira has indeed sent a few colonists; she could have sent the thousands which go every year to the New World.

It is not too late: the land is there; great areas are still unappropriated by speculators, and could be utilized by the settler in a number of ways. The 12,000,000 acres of the healthy uplands could support a large farming population, and the commerce spreading along the line of railway, and at the ports and towns, would provide work and wealth for many thousands more.

Another mistake has been her commercial policy, which includes a high tariff.

Though protective tariffs have their value in certain circumstances, such circumstances did not apply to Angola. The encouragement to trade was essential, cheapness of the means of living were necessary to encourage immigration, and should not have been antagonistic to the protection of a growing colonial industry. Trade with Portugal would have been none the worse if the discriminating tariff against foreign goods had been moderated. Imports were instituted which not only varied at the different ports, but were so high at most of them as to prevent foreign trade. The tariff at Luanda, Benguella, Lobito, and Mossamedes, the principal ports, is 25 per cent. *ad valorem* on unspecified goods, and higher than this on certain specified articles. The dues at Ambriz remain moderate (10 to 12 per cent. *ad valorem*), largely owing to the initiative of Monteiro, an Englishman with a Portuguese name, and the duties in the Congo district of Angola are only as moderate as 6 per cent. because they are regulated by international agreement.

Inordinate preference is also given to goods carried in Portuguese vessels, a fact which discourages the free shipping which the colony needs. Owing to this somewhat short-sighted policy, trade has remained almost stationary for the last twenty years, the imports being from $6,000,000 to $10,000,000, while exports, influenced by other strangling ordnances, have been equally stationary. The shipping returns, a reflection of the trade of the country, have remained less than a million tons during the last dozen years.

Angola's budget returns show that her administrative methods are as open to criticism as her commercial policy.

The revenue of $2,000,000 to $3,000,000 never seems to balance the expenditure, which is often twice as great; and Portugal pays for Angola instead of profiting from its greatest colony. The colony suffers also, I think, from bureaucracy, too many poorly-paid administrators, and too much red tape. The Governors of Districts and Chiefs of civil and military "circunscripsions," or subdistricts, sit in their offices and write about the work instead of going round the district and seeing it done. My experience was that most of the really charming and hospitable gentlemen I met, rarely got into personal touch with their native subjects or practical questions; they did not even know the geography of their districts.

While realizing to the full the great spaces of Angola, and the difficulty of travel, I have no hesitation in saying that the diary of travel of the Portuguese Administrators would compare very unfavourably with that of a District Official of a British African Colony. The native soldiers and police, who are organized in companies on a district basis, often appear to represent the authority of the Administrator under whom they serve; and every one who knows Africa will realize what delegation of authority means to such people, and what a tyrant a black in temporary authority can prove if given the chance. The money required for opening up roads and encouraging local native production is partly spent in paying the large Portuguese administrative staffs, especially in the big towns.

Some of the labour, already so scarce, and which should be fully utilized for the urgent needs of the colony, is lost to San Thomé and Principe to the obvious advantage of those islands, but to the undoubted detriment of Angola.

If I have spoken frankly, I speak as a friend who wishes to see Portugal hold all the colonies bequeathed her by the gallantry of her earlier discoverers; but methods must be changed. Foreign capital and trade should be encouraged, for in the increased wealth and prosperity which they would bring to the colony, Portugal would gain far more than any small temporary advantage that protective colonial legislation might appear to bestow. Angola should be dealt with on great and statesman-like lines, for she is a great colony.

There is probably no other single colony in Africa that has so much land colonizable by Europeans and suitable for the extensive cultivation of cereals, which all grow well in the Angolan highlands, and maize especially so. In the lower plateaux and coast land, cotton, sugar-cane, and rice can flourish, while coffee, oil palms, and pineapples grow wild and in profusion in the north.

There is no African colony with a better access for these products to the markets of Europe, or better harbours to sail her ships from. In few colonies runs a railway with greater potentialities than that from Benguella to Katanga (which I have called for convenience in this book the Central Angolan Line), for Katanga is one of the richest mine lands in the world, a country of immense reefs of copper, zinc, gold, coal, and iron.

To the north of Angola there are also the great diamond fields of the Kasai, worked by Belgians and Americans, and the resources of these mines are reputed fabulous in their richness. By the coast is oil, I believe in good quantity. A vast concession to the north of the central railway has been granted to an American company, and from the energy and apparent optimism of her very alert oil engineers, it is possible that America has found yet another good investment.

She is losing no time in exploiting Angola, and American companies have secured vast concessions covering possibly one-third of the area of the colony.

In the south of Angola an English company has obtained an oil concession, and is very optimistic of its possibilities.

In regard to colonization, Angola is better suited to Portuguese and Italian settlers of small holdings than to the British, for the country has already a considerable Portuguese colony, some 20,000 people, and an Englishman would find social life and the Portuguese language obstacles to his progress and comfort. It is to the settler with means and the investor that this country should appeal, for the land and climate are good, and values, owing to the low rate of exchange, very favourable to the Englishman. Signor Norton de Mattos, Portugal's High Commissioner for Angola, is one of the greatest of her colonial administrators, and if one man can make a difference to a colony, Norton de Mattos will achieve it. He is also a friend of Great Britain and the British.

One of the assets of Angola is its big game. It is difficult to make the Portuguese realize how much game preservation has helped the British colonies economically by attracting to them those who, coming to shoot big game in the first instance, remain to develop the country which its game has made attractive.

The income of Angola would be largely increased if game licences, limiting the number and sex of the animals to be killed, were enforced ; for the game protection ensured by such licences would itself ensure continued and increasing income as the game increased.

There are game licences even in Angola, but the fees charged are so small and the number of animals it is permitted to kill so large, that trading in skins, horns, and meat of the greater game animals is an active and thriving business. I have watched with melancholy interest wagon-loads of such consignments unloaded at Mossamedes.

With a licence costing £6 to a Portuguese, and at the present rate of exchange less than £1 to an Englishman, between 100 and 150 of the greater game animals can be shot, and apparently more than one licence can be obtained by the same hunter within the year.

Big game must have been very abundant in Angola in the last three or four centuries, from the old Portuguese, Dutch, and Italian histories I have read. Eighty years ago, when Livingstone crossed the country, there were still great herds of game, and thirty or more years later, when Cameron, Capello, Ivens, Serpa Pinto, Monteiro, and others travelled in Angola, they found game still numerous. In the earlier years it was the native who destroyed these splendid beasts continually as regards season, and indiscriminately as regards sex, by snare and pitfall, and weapons of every description; but he is not mainly responsible for their destruction to-day.

The slaughter of game became intensified when the Boer entered Angola from South Africa, forty years ago. Trekking to virgin lands where they thought to live their own life, these hardy travellers, expert but merciless hunters, moved ever north-westwards through the Kalahari desert, past Lake N'gami, and up the rivers that feed this drying desert lake till they arrived in the uplands of south Angola, where they settled.

Along the path of the trek they left not only their own skeletons, and those of their oxen, but thousands upon thousands of bones of the game they killed for meat and skin; they were to the game of the land as the locusts were to the grass.

The Boer quickly destroyed the game round Huilla, where he had settled, and then went back to south-east Angola or westward to the coastal belt to carry on the hunting which seemed needful to his mentality and necessary for his physical wants.

I have no right to criticize these people, loving the hunting life, and living it myself whenever possible. There is, of course, no excuse for any one like myself, who has not the Boer's need, to slaughter game like a Boer, for no man should kill more than he needs for a collection or food; but it is necessary to restrict the slaughter of game in Angola for the sake of the Boer as well as the country. As long as licences are unlimited and easily obtainable, the Boer will neglect his farming to make money more readily from skins, meat, and trophies, and by his very zeal will destroy his future and better profit, and one of the real resources of the country. The small Portuguese merchant has now learnt the value of this trade in skins, native hunters are everywhere collecting them, and unless the Government steps in, the extermination of Angolan game is assured.

By forming game preserves or even giving it protection through proper licences, animal life would increase again, and the Boer will always have his sport and a far greater profit from hiring his transport wagons to the rich man who comes shooting to Angola, than he could have obtained by hunting himself. The country will gain greatly, for this type of hunter, who has come to shoot, may invest or settle and develop the colony. There is one animal that I hope will be saved by new game laws: the wonderful giant sable of Angola.

For many years the origin of a single sable horn, 61 inches long, which hangs in the Florence Museum, has been a puzzle to big-game hunters. It is now probable that it was brought to Europe in those far-off days when the Italian Missions travelled and taught the way of the Cross in the country.

Easy to shoot, a prize to the needy hunter, and largely if not entirely confined to a narrow watershed between two deep rivers, a few herds of the giant sable await certain extermination unless shielded. Only such protection as is afforded to royal game can, and should, save a beast which is so truly royal.

GOVERNMENT AND ADMINISTRATIVE DIVISION OF ANGOLA WITH TABLES OF POPULATION, FINANCE, AND COMMERCE.

ANGOLA (CAPITAL, LOANDA); AREA, 480,000 sq. miles; POPULATION, 3,500,000 (approx.); DENSITY, 7 per sq. mile.

Government.—HIGH COMMISSIONER (appointed temporarily for the economic development of the Colony), GOVERNOR-GENERAL AND COUNCIL, CHIEF OF ARMY AND MARINE, DIRECTORS OF FINANCE, PUBLIC WORKS, HEALTH, NATIVE AFFAIRS, CUSTOMS, etc.

CIVIL DISTRICTS, UNDER CIVIL GOVERNORS, AND DIVIDED INTO DISTRICTS CALLED CONCILHOS AND CIRCUNSCRIPSIONS.

MILITARY DISTRICTS, UNDE
MILITARY GOVERNORS, DIVIDE
INTO SUBDISTRICTS CALLED CAPI
TANIAS MOR.

Name	*Congo*	*N. Coanza*	*S. Coanza*	*Benguella*	*Mossamedes*	*Huilla*	*Lunda*	*Moxico*	*Cubango*
Capital	Muxela do Zombo	N'dala N'tando	Amboim	Benguella	Mossamedes	Lubango	Saurimo	Moxico	Cuita Cuanavale
Area	35,000	51,000	48,000	74,000	20,400	63,000	66,000	78,500	69,000
Population	300,000	500,000	600,000	800,000	10,000	500,000	500,000	200,000	200,000
Density to sq. mile	10	10	12	11	0·5	7·5	7·5	2·5	3

FINANCE.

Year.	Revenue (Escudos).	Expenditure (Escudos).	Deficit (Escudos).
	$	$	$
1900–1	1,656,000	2,486,000	830,000
1901–2	1,844,000	1,994,000	150,000
1902–3	1,743,000	2,026,000	283,000
1903–4	1,683,000	2,331,000	646,000
1904–5	..	..	..
1905–6	1,351,000	2,337,000	986,000
1906–7	1,384,000	2,777,000	1,393,000
1907–8	1,469,000	2,647,000	1,178,000
1908–9	1,497,000	3,494,000	1,997,000
1909–10	2,528,000	3,678,000	1,150,000
1910–11	2,321,000	3,171,000	850,000
1911–12	2,321,000	3,171,000	850,000
1912–13	2,012,000	3,612,000	1,602,000
1913–14	3,428,000	5,093,000	1,664,000
1914–15	..	..	..
1915–16	..	..	..
1916–17	6,835,000	6,335,000	.
1917–18	13,435,000	16,668,000	3,234,000

EXPORTS AND IMPORTS.

Year.	Imports.	Exports.
	$	$
1900	6,792,000	5,921,000
1901	3,965,000	4,451,000
1902	3,469,000	3,387,000
1903	5,777,000	5,638,000
1904	7,665,000	5,645,000
1905	6,775,000	5,065,000
1906	6,541,000	5,068,000
1907	6,919,000	4,760,000
1908	5,435,000	4,269,000
1909	5,970,000	6,083,000
1910	9,809,000	8,321,000
1911	5,857,000	5,757,000
1912	5,341,000	6,971,000
1913	5,723,000	5,595,000
1914	5,214,000	4,347,000
1915	.	..
1916	8,799,000	6,713,000

DETAILS OF EXPORTS.

(Quantities in Tons.)

Products.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
Sugar	1,717	1,157	3,262	4,561	2,976	5,265	5,823	4,431
Rubber	3,202	2,558	2,737	2,002	1,914	2,077	1,687	1,044
Mealies	..	..	477	2,114	4,052	930	..	.
Coffee	6,056	4,446	4,031	4,833	4,458	4,000	3,203	4,089
Copra	2,317	3,360	2,046	3,760	3,976	2,407	2,476	2,497
Beans	..	..	180	..	817	267	1,709	1,636
Wax	716	742	791	813	776	1,132	832	530
Dried fruit	3,777	5,539	3,637	3,562	..	4,211	4,426	5,176
White oil	2,160	..	11,622	..	9,786	3,230	391	659
Palm oil	..	..	..	..	..	..	..	1,254
Cotton	144	123	..	..	165	64	150	109
Coiros	..	..	..	..	561	863	905	311

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